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**DEPARTMENT OF DEFENSE
IN-HOUSE ADJEE ACTIVITIES**



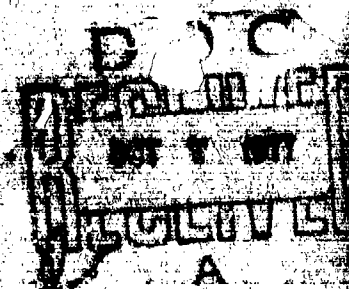
30 October 1971

Management Analysis Report

Department of the Army

Department of the Navy

Department of the Air Force



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(6) DEPARTMENT OF DEFENSE IN-HOUSE RDT&E ACTIVITIES

Harold F. Davidson

(10) 30 October 1971

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Office of the Chief of Research and Development
Department of the Army
Washington, D.C. 20310

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FOREWORD

This report was prepared by the Department of the Army at the request of the Director of Defense Research and Engineering. The Departments of the Army, the Navy and the Air Force provided comprehensive data on the finances, manpower and facilities of their organizations that perform research, development, test and evaluation (RDT&E). In addition, they briefly described each activity's mission, current important programs, functions, and equipment capabilities. The statistical data relate to the past and current fiscal years, i.e., 1971 and 1972.

Each in-house RDT&E activity of the Department of Defense is described on one page in this compilation. The data for FY 1971 are summarized in tables preceding the main text.

This edition is the sixth of a series that started in 1966. All information was submitted on key-punched cards, and the report's preparation was thus entirely automated--with some manual correction of typographical errors and clarification of obscure abbreviations and contractions. The computer that produced the printed pages had no ampersand (&) and, instead, usually printed a plus sign (+) for the word "and."

All current DoD RDT&E activities are listed in the Contents alphabetically within each Department. Some new organizational names appear in this issue, and others have been changed since last year; for this information, see Appendix I.

Appendix II contains the definitions given in DoD Instruction 7700.9¹ and employed as the basis for these data. Appendix III lists selected standard abbreviations and acronyms.

Thanks are extended to Mr. John J. Ruddy, Air Force Data Services Center, Department of the Air Force, and Mr. Donald J. Ertel, Office, Chief of Research and Development, Department of the Army, for their kind assistance.

¹DoD Instruction 7700.9, "Research and Development Resource Data for In-House RDT&E Activities," dated 26 August 1970.

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SUMMARY

DEPARTMENT OF DEFENSE IN-HOUSE RDT+E LABORATORIES

PROGRAM DATA FOR FY 1971 (ACTUAL)

| | |
|---------------------------------|---------------|
| | (MILLIONS \$) |
| TOTAL ANNUAL LABORATORY PROGRAM | 3771.659 |
| TOTAL INHOUSE PROGRAM | 2130.426 |
| TOTAL RDT+E PROGRAM | 2442.641 |
| TOTAL INHOUSE RDT+E | 1361.942 |
| TOTAL ANNUAL OPERATING COST | 573.287 |

PERSONNEL DATA (END OF FY 1971)

| PERSONNEL | AUTHORIZED STRENGTH | TOTAL PHD | TOTAL PROFESSIONALS |
|-----------|------------------------|--------------|------------------------|
| MILITARY | 28671 | 1069 | 8786 |
| CIVILIAN | 81879 | 2675 | 28687 |
| TOTAL | 110550 | 3744 | 37473 |

PHYSICAL FACILITIES (END OF FY 1971)

| | |
|----------------------------|-----------|
| ACRES..... | 8616097 |
| SPACE (THOUSANDS OF SQ FT) | |
| LABORATORY..... | 28750.557 |
| ADMINISTRATIVE..... | 9243.119 |
| OTHER..... | 53033.189 |
| TOTAL..... | 91026.865 |
| COST (MILLIONS \$) | |
| REAL PROPERTY..... | 3509.328 |
| EQUIPMENT..... | 3756.106 |
| TOTAL..... | 7265.434 |

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TABLE 1. ARMY RDT+E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1971

| INSTALLATION | FUNDING DATA (MILLIONS \$) | | | | PERSONNEL DATA | | | | | | | | | |
|--|----------------------------|----------|---------|----------|----------------|------|-------|---------|---------|---------|-------|-------|-------|-------|
| | TOTAL | IN-HOUSE | TOTAL | IN-HOUSE | TOTAL | MIL | TOTAL | PHD | PHD | PHD | PHD | PHD | PHD | PHD |
| | | | | | | | | | | | | | | |
| AEROMEDICAL RESEARCH LAB., FT. RUCKER, ALA. | 1,550 | 1,552 | 1,552 | 1,552 | 48 | 48 | 23 | 17 | 1 | 43 | 2 | 2 | 2 | 2 |
| AIRBORNE, ELECTR. AND SPECIAL WARFARE BD., FT BRAGG NC | 4,192 | 4,192 | 4,192 | 4,192 | 205 | 205 | 55 | 55 | 0 | 52 | 8 | 8 | 8 | 8 |
| AIR DEFENSE BOARD, FT. BLISS, TEX. | 6,234 | 6,183 | 3,693 | 3,592 | 354 | 354 | 114 | 2 | 0 | 54 | 11 | 11 | 11 | 11 |
| AIR MOBILITY RSCH AND DEVEL LAB. MOFFETT FIELD, CALIF | 37,089 | 24,113 | 37,026 | 24,050 | 55 | 55 | 551 | 1 | 19 | 23 | 230 | 230 | 230 | 230 |
| ARCTIC TEST CENTER, FT. GREELY, ALASKA | 4,762 | 4,752 | 2,221 | 2,211 | 333 | 333 | 27 | 0 | 0 | 54 | 3 | 3 | 3 | 3 |
| ARMOR AND ENGINEER BOARD, FT. KNOX, KY | 4,684 | 4,537 | 1,854 | 1,787 | 431 | 431 | 98 | 0 | 0 | 66 | 8 | 8 | 8 | 8 |
| ARMY MATERIAL SYST AND ANAL AGENCY, ABERDEEN P.G., MD. | 13,856 | 8,261 | 12,841 | 7,179 | 13 | 13 | 314 | 0 | 3 | 13 | 238 | 238 | 238 | 238 |
| ARTILLERY BOARD, FT. SILL, OKLA. | 3,668 | 3,538 | 8,958 | 8,928 | 389 | 389 | 39 | 0 | 0 | 138 | 2 | 2 | 2 | 2 |
| ATMOSPHERIC SCIENCE LAB. WHITE SANDS, NEW MEXICO | 12,795 | 12,716 | 18,023 | 7,948 | 516 | 516 | 253 | 0 | 18 | 12 | 114 | 114 | 114 | 114 |
| AVIATION TEST ACTIVITY, EDWARDS AFB, CAL. | 3,817 | 3,768 | 2,748 | 2,691 | 75 | 75 | 141 | 0 | 1 | 56 | 33 | 33 | 33 | 33 |
| AVIATION TEST BOARD, FT. RUCKER, ALA. | 7,641 | 5,341 | 5,256 | 2,956 | 258 | 258 | 139 | 0 | 0 | 43 | 5 | 5 | 5 | 5 |
| AVIONICS LABORATORY, FORT MONMOUTH, N.J. | 14,285 | 11,813 | 11,240 | 8,118 | 38 | 38 | 289 | 1 | 4 | 29 | 144 | 144 | 144 | 144 |
| BALLISTIC RES. LABS., ABERDEEN PROVING GROUND, MD. | 24,985 | 19,389 | 24,379 | 18,718 | 76 | 76 | 724 | 12 | 73 | 73 | 483 | 483 | 483 | 483 |
| BEHAVIORAL SCIENCE RES. LAB., WASH., D.C. | 2,721 | 1,951 | 2,721 | 1,951 | 4 | 4 | 83 | 0 | 24 | 1 | 57 | 57 | 57 | 57 |
| BIOLOGICAL LABS., FT. DETRICK, MD. | 28,835 | 28,713 | 18,547 | 18,425 | 77 | 77 | 218 | 5 | 23 | 33 | 92 | 92 | 92 | 92 |
| COATING AND CHEMICAL LAB., ABERDEEN PROVING GROUND, MD | 2,827 | 1,412 | 2,591 | 1,215 | 5 | 5 | 44 | 1 | 2 | 6 | 24 | 24 | 24 | 24 |
| COLD REGIONS RSCH + ENGR LAB, HANOVER, N. H. | 6,276 | 5,398 | 5,582 | 4,695 | 41 | 41 | 218 | 4 | 21 | 61 | 88 | 88 | 88 | 88 |
| COMBAT SURVEILLANCE GROUP, FT. MONMOUTH, N.J. | 9,370 | 1,895 | 9,370 | 1,895 | 67 | 67 | 283 | 2 | 6 | 16 | 183 | 183 | 183 | 183 |
| CONSTRUCTION ENGR. RESEARCH LAB., FORT MONMOUTH, N.J. | 31,089 | 15,307 | 30,784 | 15,002 | 33 | 33 | 355 | 0 | 7 | 21 | 265 | 265 | 265 | 265 |
| DESERT TEST CENTER (LABS) DUGWAY, UTAH | 15,791 | 18,878 | 15,636 | 13,315 | 460 | 460 | 1899 | 6 | 14 | 72 | 137 | 137 | 137 | 137 |
| DEVELOPMENT AND PROOF SERVICES, APG, MD. | 26,921 | 26,662 | 9,863 | 9,867 | 232 | 232 | 1131 | 2 | 2 | 79 | 193 | 193 | 193 | 193 |
| EDGEWOOD ARSENAL LABS., EDGEWOOD ARSENAL, MD | 4,135 | 18,151 | 8,717 | 5,478 | 449 | 449 | 268 | 0 | 1 | 124 | 69 | 69 | 69 | 69 |
| ELECTRONICS PROVING GROUND, FT. HUACUCA, ARIZ | 25,903 | 14,002 | 25,733 | 13,059 | 17 | 17 | 452 | 9 | 52 | 14 | 303 | 303 | 303 | 303 |
| ELECTRONIC TECHNOLOGY + DEVICES LAB, FT MONMOUTH, N.J. | 8,600 | 8,622 | 8,600 | 8,600 | 89 | 89 | 328 | 1 | 1 | 16 | 176 | 176 | 176 | 176 |
| ELECTRONIC WARFARE LAB, FT MONMOUTH, N.J. | 15,813 | 5,144 | 18,853 | 4,534 | 15 | 15 | 239 | 1 | 13 | 16 | 137 | 137 | 137 | 137 |
| ENGINEER TOPOGRAPHIC LAB., FT BELVOIR, VA. | 15,511 | 18,722 | 18,919 | 18,130 | 13 | 13 | 1188 | 2 | 33 | 43 | 323 | 323 | 323 | 323 |
| ENGINEER WATERWAYS EXPERIMENT STA., VICKSBURG, MISS. | 18,283 | 21,387 | 25,158 | 17,254 | 13 | 13 | 1567 | 1 | 29 | 17 | 691 | 691 | 691 | 691 |
| FRANKFORD ARSENAL LABS., PHILA., PA. | 4,515 | 4,498 | 2,259 | 2,242 | 86 | 86 | 95 | 0 | 1 | 54 | 31 | 31 | 31 | 31 |
| GENERAL EQUIPMENT TEST ACTIVITY, FT. LEE, VA. | 54,649 | 28,596 | 26,298 | 18,887 | 1362 | 1362 | 53 | 1 | 42 | 11 | 481 | 481 | 481 | 481 |
| HUMAN DIAMOND LABS., WASH., D.C. | 3,336 | 2,535 | 2,944 | 2,443 | 100 | 100 | 51 | 0 | 10 | 24 | 51 | 51 | 51 | 51 |
| HUMAN ENG. LABS., ABERDEEN PROVING GROUND, MD. | 2,836 | 1,883 | 8,948 | 8,795 | 57 | 57 | 75 | 3 | 1 | 48 | 24 | 24 | 24 | 24 |
| INFANTRY BOARD, FT. BENNING, GA. | 1,122 | 1,122 | 8,525 | 8,525 | 116 | 116 | 75 | 22 | 3 | 42 | 21 | 21 | 21 | 21 |
| INST. OF DENTAL RSCH, WALTER REED AHC, WASH., D.C. | 2,576 | 2,576 | 1,598 | 1,580 | 18 | 18 | 124 | 0 | 3 | 15 | 57 | 57 | 57 | 57 |
| INST. OF SURGICAL RSCH, BROOKS AHC, FT SAM HOUSTON, TEX. | 7,164 | 4,563 | 6,383 | 3,898 | 60 | 60 | 15 | 22 | 3 | 62 | 7 | 7 | 7 | 7 |
| LAND WARFARE LAB, ABERDEEN P.G., MD. | 8,368 | 8,368 | 8,666 | 8,666 | 12 | 12 | 618 | 6 | 61 | 12 | 214 | 214 | 214 | 214 |
| LETTERMAN ARMY INST. OF RSCH, PRESIDIO OF SAN FRAN, CAL. | 22,812 | 9,717 | 12,847 | 7,886 | 17 | 17 | 38 | 0 | 4 | 13 | 14 | 14 | 14 | 14 |
| MATERIALS AND MECHANICS RSCH CENTER WATERTOWN, MASS. | 8,750 | 8,750 | 8,637 | 8,637 | 15 | 15 | 39 | 0 | 0 | 8 | 8 | 8 | 8 | 8 |
| MATERIALS AND MECHANICS RSCH LAB., W. REED AHC, WASH DC | 8,791 | 8,791 | 8,630 | 8,630 | 14 | 14 | 96 | 38 | 0 | 41 | 28 | 28 | 28 | 28 |
| MEDICAL EQUIP. R+D LAB., FT. TOTTEN, FLUSHING, N.Y. | 5,577 | 4,568 | 3,984 | 2,887 | 113 | 113 | 98 | 30 | 12 | 76 | 46 | 46 | 46 | 46 |
| MED. RSCH OF INFECTIOUS DISEASES, FT. DETRICK, MD. | 3,416 | 3,416 | 2,276 | 2,276 | 97 | 97 | 118 | 14 | 16 | 7 | 31 | 31 | 31 | 31 |
| MED. RES. AND NUTR. LAB., FITZSIMONS GH, DENVER, COLO. | 3,167 | 3,167 | 1,854 | 1,854 | 9 | 9 | 8 | 2 | 0 | 5 | 0 | 0 | 0 | 0 |
| MEDICAL RES. LAB. FT. KNOX, KY. | 8,281 | 8,281 | 8,163 | 8,163 | 6 | 6 | 1867 | 2 | 49 | 75 | 552 | 552 | 552 | 552 |
| MEDICAL RESEARCH UNIT, BALBOA HEIGHTS, CANAL ZONE | 8,241 | 8,241 | 8,163 | 8,163 | 60 | 60 | 1867 | 2 | 49 | 75 | 552 | 552 | 552 | 552 |
| MEDICAL RES. UNIT, KUALA LUMPUR, MALAYSIA | 78,738 | 41,991 | 71,635 | 35,251 | 54 | 54 | 1366 | 1 | 9 | 44 | 338 | 338 | 338 | 338 |
| MISSILE COMMAND R+D LABS., REDSTONE ARSENAL, ALA. | 52,768 | 25,155 | 33,761 | 15,915 | 150 | 150 | 1242 | 10 | 95 | 72 | 407 | 407 | 407 | 407 |
| MOBILITY EQUIP. RES. AND DEVELOP. CENTER, FT BELVOIR, NATICK LABS., NATICK, MASS | 28,622 | 23,511 | 16,850 | 12,585 | 150 | 150 | 1242 | 10 | 95 | 72 | 407 | 407 | 407 | 407 |
| NIGHT VISION LABORATORY, FORT BELVOIR, VA. | 118,800 | 56,215 | 75,638 | 51,815 | 68 | 68 | 2575 | 2 | 62 | 59 | 177 | 177 | 177 | 177 |
| PICATINNY ARSENAL LABS., DOVER, N.J. | 3,239 | 3,239 | 2,563 | 2,563 | 15 | 15 | 797 | 1 | 36 | 13 | 338 | 338 | 338 | 338 |
| RES. INST. OF ENVIRONMENTAL MEDICINE, NATICK, MASS. | 22,195 | 14,216 | 15,394 | 8,416 | 69 | 69 | 595 | 0 | 0 | 8 | 93 | 93 | 93 | 93 |
| ROCK ISLAND ARSENAL LABS., ROCK ISLAND, ILL | 11,384 | 11,868 | 11,868 | 18,362 | 19 | 19 | 978 | 0 | 6 | 28 | 427 | 427 | 427 | 427 |
| RSCH-DEVELOPMENT TECH SUPPORT ACTIVITY FT MONMOUTH NJ | 43,581 | 28,963 | 18,362 | 8,576 | 154 | 154 | 91 | 0 | 2 | 18 | 21 | 21 | 21 | 21 |
| TANK-AUTOMOTIVE COMMAND LABS., WARREN, MICH. | 4,885 | 3,938 | 2,588 | 2,588 | 481 | 481 | 732 | 165 | 56 | 296 | 347 | 347 | 347 | 347 |
| TROPIC TEST CENTER, FT. CLAYTON, CANAL ZONE | 17,824 | 17,824 | 11,387 | 11,387 | 4 | 4 | 452 | 1 | 42 | 3 | 169 | 169 | 169 | 169 |
| WALTER REED ARMY INST. OF RES., WASH., D.C. | 16,192 | 15,582 | 6,737 | 6,737 | 1330 | 1330 | 3648 | 4 | 8 | 971 | 564 | 564 | 564 | 564 |
| WATERLIET ARSENAL LABS., WATERLIET, N.Y. | 107,993 | 88,896 | 93,977 | 76,245 | 461 | 461 | 761 | 0 | 0 | 371 | 32 | 32 | 32 | 32 |
| WHITE SANDS MISSILE RANGE, WHITE SANDS, N.M. | 25,357 | 25,357 | 9,437 | 9,437 | 8817 | 8817 | 29195 | 488 | 1855 | 3855 | 11066 | 11066 | 11066 | 11066 |
| YUMA PROVING GROUND, YUMA, ARIZ | 1878,852 | 788,337 | 785,284 | 541,236 | 1817 | 1817 | 852 | 788,337 | 785,284 | 541,236 | | | | |
| TOTALS | 1878,852 | 788,337 | 785,284 | 541,236 | 8817 | 8817 | 29195 | 488 | 1855 | 3855 | 11066 | 11066 | 11066 | 11066 |

TABLE 2. ARMY ROT+E FACILITIES DATA, FY 1971

| INSTALLATION | ACRES | SPACE (THOUSANDS OF SQUARE FEET) | LABORATORY | ADMIN | STILL | COST (MILLIONS \$) | |
|---|---------|----------------------------------|------------|-----------|---------|--------------------|-----------|
| | | | | | | REAL PROPERTY | EQUIPMENT |
| AEROMEDICAL RESEARCH LAB., FT. RUCKER, ALA. | 238 | 21,495 | 5,942 | 7,476 | 0.203 | 1,340 | 0.000 |
| AIRBORNE, ELECTR. AND SPECIAL WARFARE BD., FT. BRAGG NC | 2 | 6,000 | 56,879 | 16,398 | 2,925 | 0.000 | 2,925 |
| AIR DEFENSE BOARD, FT. BLISS, TEX. | 24 | 36,558 | 38,646 | 77,417 | 2,196 | 11,855 | 11,855 |
| AIR MOBILITY RSCH AND DEVEL LAB. MOFFETT FIELD, CALIF | 128 | 85,814 | 63,349 | 15,534 | 5,446 | 1,474 | 5,446 |
| ARCTIC TEST CENTER, FT. GREELY, ALASKA | 72,234 | 11,113 | 34,288 | 314,237 | 34,962 | 7,349 | 34,962 |
| ARMOR AND ENGINEER BOARD, FT. KNOX, KY | 6574 | 4,400 | 60,838 | 258,314 | 8,340 | 2,350 | 8,340 |
| ARMY MATERIAL SYST AND ANAL AGENCY, ABERDEEN P.G., MD. | 4 | 41,900 | 18,730 | 34,014 | 1,223 | 0.000 | 1,223 |
| ARTILLERY BOARD, FT. SILL, OKLA. | 45 | 4,254 | 61,245 | 79,728 | 6,240 | 0.000 | 6,240 |
| ATMOSPHERIC SCIENCE LAB. WHITE SANDS, NEW MEXICO | 45 | 8,058 | 8,925 | 0.000 | 48,941 | 0.000 | 48,941 |
| AVIATION TEST ACTIVITY, EDWARDS AFB, CAL. | 9 | 4,288 | 32,838 | 99,498 | 1,109 | 3,627 | 3,627 |
| AVIATION TEST BOARD, FT. RUCKER, ALA. | 2149 | 3,018 | 12,138 | 15,272 | 2,054 | 16,411 | 16,411 |
| AVIONICS LABORATORY, FORT MONMOUTH, N.J. | 25 | 67,149 | 4,378 | 4,726 | 2,684 | 11,980 | 11,980 |
| BALLISTIC RES. LABS., ABERDEEN PROVING GROUND, MD. | 3469 | 298,232 | 74,558 | 2,612,6 | 12,786 | 19,582 | 12,786 |
| BEHAVIORAL SCIENCE RES. LAB., WASH., D.C. | 8 | 25,816 | 4,367 | 1,893 | 0.000 | 1,985 | 0.000 |
| BIOLOGICAL LABS., FT. DETRICK, MD. | 1228 | 1823,267 | 181,878 | 913,832 | 72,562 | 18,423 | 72,562 |
| COATING AND CHEMICAL LAB., ABERDEEN PROVING GROUND, MD | 1 | 16,385 | 1,868 | 4,588 | 6,581 | 8,642 | 6,581 |
| COLD REGIONS RSCH + ENGR LAB, HANOVER, N. H. | 631 | 19,813 | 9,848 | 188,415 | 3,986 | 4,133 | 3,986 |
| COMBAT SURVEILLANCE GROUP, FT. MONMOUTH, N.J. | 71 | 95,674 | 7,281 | 18,468 | 2,418 | 15,773 | 2,418 |
| COMMUNICATIONS + ADP LAB, FORT MONMOUTH, N.J. | 12 | 75,385 | 7,389 | 1,815 | 0.000 | 6,987 | 0.000 |
| CONSTRUCTION ENGR. RESEARCH LAB., URBANA, ILL. | 15 | 68,875 | 32,875 | 0.000 | 3,481 | 1,795 | 3,481 |
| DESERT TEST CENTER LABS, DUGWAY, UTAH | 246302 | 280,463 | 139,594 | 338,395 | 68,969 | 19,486 | 68,969 |
| DEVELOPMENT AND PROOF SERVICES, APG, MD. | 68728 | 84,400 | 78,888 | 916,860 | 47,800 | 31,800 | 47,800 |
| EDGEWOOD ARSENAL LABS., EDGEWOOD ARSENAL, MD | 4255 | 679,877 | 122,839 | 183,630 | 15,540 | 10,500 | 15,540 |
| ELECTRONICS PROVING GROUND, FT. HUACHUCA, ARIZ | 9231 | 6,000 | 174,526 | 0.000 | 4,989 | 34,100 | 4,989 |
| ELECTRONIC TECHNOLOGY + DEVICES LAB, FT MONMOUTH, N.J. | 247 | 163,096 | 4,000 | 4,298 | 5,432 | 11,412 | 5,432 |
| ELECTRONIC WARFARE LAB, FT MONMOUTH, N.J. | 8 | 31,576 | 57,453 | 18,713 | 1,248 | 34,165 | 1,248 |
| ENGINEER TOPOGRAPHIC LAB., FT BELVOIR, VA. | 8 | 47,384 | 9,988 | 2,657 | 0.000 | 9,358 | 0.000 |
| ENGINEER WATERWAYS EXPERIMENT STA., VICKSBURG, MISS. | 1884 | 1375,000 | 383,534 | 238,846 | 22,531 | 0.000 | 22,531 |
| FRANKFORD ARSENAL LABS., PHILA., PA. | 22 | 558,000 | 134,000 | 557,892 | 9,470 | 0.000 | 9,470 |
| GENERAL EQUIPMENT TEST ACTIVITY, FT. LEE, VA. | 453 | 68,589 | 121,625 | 21,360 | 1,550 | 2,314 | 1,550 |
| HARRY DIAMOND LABS., WASH., D.C. | 2778 | 281,602 | 46,119 | 54,154 | 11,374 | 22,871 | 11,374 |
| HUMAN ENG. LABS., ABERDEEN PROVING GROUND, MD. | 18 | 26,500 | 17,605 | 24,658 | 1,513 | 3,210 | 1,513 |
| INFANTRY BOARD, FT. BENNING, GA. | 8 | 6,000 | 47,343 | 28,576 | 0.552 | 0.388 | 0.552 |
| INST. OF DENTAL RSCH, WALTER REED AMC, WASH., D.C. | 1 | 7,111 | 4,722 | 1,774 | 0.000 | 0.000 | 0.000 |
| INST. OF SURGICAL RSCH, BROOKE AMC, FT SAM HOUSTON, TEX. | 1 | 18,424 | 0.000 | 19,000 | 1,868 | 0.868 | 1,868 |
| LAND WARFARE LAB, ABERDEEN P.G., MD. | 88 | 36,311 | 2,655 | 12,628 | 0.687 | 0.696 | 0.687 |
| LETTERMAN ARMY INST. OF RSCH, PRESIDIO OF SAN FRANCISCO, CAL. | 8 | 68,102 | 8,908 | 0.000 | 0.000 | 0.000 | 0.000 |
| MATERIALS AND MECHANICS RSCH CENTER WATERTOWN, MASS. | 48 | 416,100 | 122,400 | 159,800 | 14,212 | 13,200 | 14,212 |
| MEDICAL BIOMECHANICAL RES. LAB., W. REED AMC, WASH DC | 8 | 11,463 | 1,022 | 0.000 | 0.930 | 0.380 | 0.930 |
| MEDICAL EQUIP. RU LAB., FT. TOTTEN, FLUSHING, N.Y. | 8 | 7,364 | 3,577 | 31,789 | 0.556 | 0.466 | 0.556 |
| MED. RSCH OF INFECTIOUS DISEASES, FT. DETRICK, MD. | 8 | 71,728 | 13,238 | 185,994 | 8,284 | 1,823 | 8,284 |
| MED. RES. AND NUTR. LAB., FITZSIMONS GH, DENVER, COLO. | 6 | 83,663 | 5,138 | 19,887 | 4,791 | 3,938 | 4,791 |
| MEDICAL RES. LAB, FT. KNOX, KY. | 10 | 86,786 | 5,368 | 26,788 | 0.938 | 3,402 | 0.938 |
| MEDICAL RESEARCH UNIT, BALBOA HEIGHTS, CANAL ZONE | 8 | 5,078 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| MILITARY RES. UNIT, KUALA LUMPUR, MALAYSIA | 8 | 7,000 | 0.000 | 0.000 | 0.100 | 0.222 | 0.100 |
| MISSILE COMMAND R-D LABS., REDSTONE ARSENAL, ALA. | 11284 | 898,760 | 140,686 | 71,250 | 25,823 | 25,891 | 25,823 |
| MOBILITY EQUIP. RES. AND DEVELOP. CENTER, FT BELVOIR, VA. | 3287 | 285,697 | 217,336 | 357,643 | 23,197 | 29,602 | 23,197 |
| NATICK LABS., NATICK, MASS | 6495 | 525,000 | 65,908 | 274,688 | 39,824 | 12,458 | 39,824 |
| NIGHT VISION LABORATORY, FORT BELVOIR, VA. | 8 | 73,625 | 29,883 | 67,131 | 4,295 | 36,208 | 4,295 |
| PICATINNY ARSENAL LABS., DOVER, N.J. | 8 | 594,642 | 668,245 | 2580,998 | 72,150 | 58,500 | 72,150 |
| RES. INST. OF ENVIRONMENTAL MEDICINE, NATICK, MASS. | 8 | 76,157 | 12,356 | 31,167 | 6,982 | 1,952 | 6,982 |
| ROCK ISLAND ARSENAL LABS., ROCK ISLAND, ILL | 19 | 95,600 | 91,620 | 284,754 | 1,466 | 10,259 | 1,466 |
| RSCH-DEVELOPMENT TECH SUPPORT ACTIVITY FT. MONMOUTH NJ | 136 | 71,360 | 9,780 | 389,988 | 6,781 | 6,948 | 6,781 |
| TANK-AUTOMOTIVE COMMAND LABS., WARREN, MICH. | 1125 | 315,988 | 0.000 | 0.000 | 13,183 | 16,273 | 13,183 |
| TROPIC TEST CENTER, FT. CLAYTON, CANAL ZONE | 37218 | 86,218 | 59,294 | 27,847 | 3,160 | 2,228 | 3,160 |
| WALTER REED ARMY INST. OF RES., WASH., D.C. | 1172 | 393,200 | 57,500 | 0.000 | 0.000 | 12,276 | 0.000 |
| WATERVLIET ARSENAL LABS., WATERVLIET, N.Y. | 4 | 216,559 | 23,250 | 0.000 | 2,365 | 3,436 | 2,365 |
| WHITE SANDS MISSILE RANGE, WHITE SANDS, N.M. | 3622273 | 1421,093 | 393,289 | 2807,128 | 163,286 | 137,866 | 163,286 |
| YUMA PROVING GROUND, YUMA, ARIZ | 1243463 | 166,267 | 72,300 | 175,429 | 05,295 | 54,681 | 05,295 |
| TOTALS | 5401655 | 11438,201 | 3956,082 | 11923,167 | 859,115 | 800,203 | 859,115 |

TABLE 3. NAVY ROT+E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1971

| INSTALLATION | FUNDING DATA (MILLIONS \$) | | | | PERSONNEL DATA | | | | | | | | | |
|---|----------------------------|---------|----------|---------|----------------|----------|-------|-------|------|-------|-----|-----|-------|------|
| | TOTAL | | TOTAL | | TOTAL | IN-HOUSE | | TOTAL | PHD | | PHD | | TOTAL | PROF |
| | IN-HOUSE | ROT+E | IN-HOUSE | ROT+E | | IN-HOUSE | ROT+E | | MIL | CIV | MIL | CIV | | |
| NAVAL AEROSPACE MEDICAL RESEARCH LAB, PENSACOLA, FLA. | 4,828 | 3,579 | 4,888 | 3,579 | 26 | 114 | 12 | 16 | 17 | 46 | | | | |
| NAVAL AEROSPACE RECOVERY FACILITY, EL CENTRO, CALIF. | 4,835 | 2,428 | 3,635 | 2,428 | 167 | 109 | 1 | 0 | 16 | 23 | | | | |
| NAVAL AIR DEVELOPMENT CENTER, JOHNSVILLE, PA. | 93,126 | 61,269 | 57,411 | 61,269 | 427 | 2496 | 13 | 28 | 78 | 1049 | | | | |
| NAVAL AIR ENGINEERING CENTER, PHILADELPHIA, PA. | 77,801 | 8,885 | 37,545 | 8,885 | 40 | 2184 | 0 | 7 | 12 | 301 | | | | |
| NAVAL AIR TEST CENTER, PATUXENT RIVER, MD. | 73,335 | 27,514 | 66,536 | 27,514 | 1293 | 2891 | 1 | 3 | 198 | 394 | | | | |
| NAVAL AIR TEST FACILITY, LAKEHURST, N. J. | 9,717 | 1,026 | 8,838 | 1,026 | 155 | 414 | 0 | 0 | 8 | 75 | | | | |
| NAVAL AIR PROPULSION TEST CENTER, TRENTON, N. J. | 14,917 | 0,721 | 12,836 | 0,721 | 10 | 694 | 0 | 0 | 7 | 162 | | | | |
| NAVAL BLOOD RESEARCH LAB., N. H., CHELSEA, MASS. | 8,428 | 0,285 | 0,320 | 0,285 | 9 | 13 | 3 | 1 | 4 | 2 | | | | |
| NAVAL CIVIL ENGINEERING LABORATORY, PORT HUENFRE, CAL. | 11,993 | 5,773 | 9,547 | 5,773 | 15 | 390 | 1 | 31 | 7 | 190 | | | | |
| NAVY CLOTHING AND TEXTILE RESEARCH UNIT, NATICK, MASS. | 1,217 | 0,613 | 1,217 | 0,613 | 1 | 66 | 0 | 0 | 1 | 24 | | | | |
| NAVAL DENTAL RESEARCH INST., NTC, GREAT LAKES, ILL. | 0,491 | 0,287 | 0,491 | 0,287 | 18 | 12 | 8 | 2 | 12 | 7 | | | | |
| NAVAL ELECTRONICS LABORATORY CENTER, SAN DIEGO, CALIF. | 56,275 | 37,668 | 52,052 | 37,668 | 118 | 1455 | 2 | 54 | 98 | 760 | | | | |
| NAVY ELECTRONIC SYST. TEST-EVAL. FAC, PATUXENT RIVER, MD. | 7,863 | 1,708 | 7,063 | 1,708 | 32 | 156 | 0 | 0 | 6 | 71 | | | | |
| NAVAL ENVIRON PREDICTION RSCH. FACILITY MONTEREY, CAL. | 0,800 | 0,800 | 0,800 | 0,800 | 4 | 20 | 1 | 0 | 3 | 8 | | | | |
| NAVAL EXPL. ORD. DISPOSAL FAC., INDIAN HEAD, MD. | 3,177 | 0,927 | 2,283 | 0,927 | 45 | 132 | 0 | 0 | 3 | 15 | | | | |
| NAVAL MEDICAL FIELD RESEARCH LAB., CAMP LEJEUNE, N.C. | 1,804 | 0,700 | 1,004 | 0,700 | 29 | 52 | 7 | 3 | 9 | 12 | | | | |
| NAVAL MEDICAL RESEARCH INSTITUTE, NNMC, BETHESDA | 6,748 | 4,767 | 6,748 | 4,767 | 173 | 235 | 42 | 30 | 90 | 79 | | | | |
| NAVAL MEDICAL RESEARCH UNIT NO.1, BERKELEY, CALIF. | 0,269 | 0,269 | 0,269 | 0,269 | 16 | 3 | 3 | 0 | 4 | 1 | | | | |
| NAVAL MEDICAL RESEARCH UNIT NO.2, TAIPEI, TAIWAN | 1,976 | 1,376 | 1,976 | 1,376 | 36 | 10 | 1 | 2 | 16 | 3 | | | | |
| NAVAL MEDICAL RESEARCH UNIT NO.3, CAIRO, EGYPT | 1,438 | 1,078 | 1,438 | 1,078 | 30 | 111 | 7 | 15 | 9 | 44 | | | | |
| NAVAL MEDICAL RESEARCH UNIT NO.4, GREAT LAKES, ILL. | 1,251 | 0,797 | 1,251 | 0,797 | 34 | 45 | 6 | 2 | 12 | 14 | | | | |
| NAVY MED. NEUROPSYCHIATRIC RES. UNIT, SAN DIEGO, CAL. | 1,129 | 0,890 | 1,129 | 0,890 | 10 | 52 | 9 | 8 | 10 | 21 | | | | |
| NAVAL MISSILE CENTER, POINT MUGU, CALIF. | 57,904 | 22,823 | 44,726 | 22,823 | 704 | 1698 | 3 | 7 | 105 | 506 | | | | |
| PACIFIC MISSILE RANGE, WHITE OAK, MD. | 80,606 | 63,569 | 54,160 | 63,569 | 865 | 3058 | 6 | 7 | 183 | 460 | | | | |
| NAVAL ORDNANCE LABORATORY, WHITE OAK, MD. | 76,957 | 51,384 | 57,295 | 51,384 | 52 | 2847 | 1 | 121 | 28 | 1187 | | | | |
| NAVAL PERSONNEL RESEARCH ACTIVITY, SAN DIEGO, CALIF. | 4,836 | 1,705 | 3,681 | 1,705 | 185 | 86 | 2 | 1 | 21 | 4 | | | | |
| NAVAL PERSONNEL RSCH AND DEVELOPMENT LAB, WASH., D. C. | 3,777 | 3,204 | 3,777 | 3,204 | 35 | 163 | 0 | 30 | 35 | 99 | | | | |
| NAVAL RESEARCH LABORATORY, WASHINGTON, D.C. | 3,800 | 2,529 | 3,800 | 2,529 | 43 | 230 | 0 | 0 | 43 | 150 | | | | |
| NAVAL SHIP RESEARCH AND DEVELOPMENT CTR., WASH., D.C. | 112,291 | 96,161 | 106,830 | 96,161 | 88 | 3705 | 3 | 376 | 11 | 1456 | | | | |
| NAVY SPACE SYSTEMS ACTIVITY, LOS ANGELES, CALIF. | 116,971 | 87,709 | 78,330 | 87,709 | 177 | 3581 | 6 | 113 | 40 | 1449 | | | | |
| NAVAL SUBMARINE MED. RSCH LAB, NEW LONDON, GROTON, CONN | 7,953 | 6,045 | 0,850 | 6,045 | 28 | 38 | 1 | 1 | 24 | 20 | | | | |
| NAVY TOXICOLOGY UNIT, NNMC, BETHESDA, MD. | 1,447 | 1,160 | 1,447 | 1,160 | 25 | 55 | 8 | 11 | 14 | 38 | | | | |
| NAVAL TRAINING DEVICES CENTER, ORLANDO, FLA. | 0,248 | 0,128 | 0,248 | 0,128 | 15 | 8 | 0 | 0 | 5 | 3 | | | | |
| NAVAL UNDERSEA R+D CENTER, SAN DIEGO, CALIF. | 72,256 | 13,564 | 23,898 | 13,564 | 50 | 1128 | 1 | 10 | 39 | 283 | | | | |
| NAVAL UNDERWATER SYSTEMS CENTER, NEWPORT, R.I. | 79,669 | 40,081 | 53,255 | 40,081 | 304 | 1621 | 0 | 05 | 33 | 652 | | | | |
| NAVAL WEAPONS CENTER, CHINA LAKE, CALIF. | 97,521 | 39,288 | 59,631 | 39,288 | 109 | 2936 | 0 | 60 | 24 | 1313 | | | | |
| NAVAL WEAPONS EVALUATION FACILITY, ALBUQUERQUE, N.MEX | 0,161 | 0,036 | 0,161 | 0,036 | 13 | 1 | 1 | 0 | 4 | 0 | | | | |
| NAVAL WEAPONS LABORATORY, DAHLGREN, VA. | 151,514 | 83,405 | 91,556 | 83,405 | 729 | 4308 | 0 | 109 | 53 | 1358 | | | | |
| | 4,543 | 1,338 | 4,543 | 1,338 | 210 | 90 | 0 | 1 | 68 | 51 | | | | |
| | 71,238 | 28,263 | 54,502 | 28,263 | 100 | 2703 | 1 | 60 | 25 | 958 | | | | |
| TOTALS | 1313,472 | 920,346 | 711,924 | 527,410 | 6440 | 39110 | 161 | 1202 | 1368 | 13260 | | | | |

TABLE 4. NAVY ROT+E FACILITIES DATA, FY 1971

| INSTALLATION | ACRES | SPACE (THOUSANDS OF SQUARE FEET) | | | SPACE AND PROPERTY | | COST (MILLIONS \$) | |
|---|---------|----------------------------------|----------|-----------|--------------------|-----------|--------------------|-----------|
| | | LABORATORY | ADMIN | OTHER | REAL PROPERTY | EQUIPMENT | REAL PROPERTY | EQUIPMENT |
| NAVAL AEROSPACE MEDICAL RESEARCH LAB, PENSACOLA, FLA. | 0 | 96.787 | 9.684 | 14.893 | 0.000 | 1.654 | 0.000 | 1.654 |
| NAVAL AEROSPACE RECOVERY FACILITY, EL CENTRO, CALIF. | 181292 | 44.000 | 10.000 | 263.000 | 8.598 | 2.400 | 8.598 | 2.400 |
| NAVAL AIR DEVELOPMENT CENTER, JOHNSVILLE, PA. | 750 | 893.839 | 55.671 | 413.524 | 22.163 | 37.897 | 22.163 | 37.897 |
| NAVAL AIR ENGINEERING CENTER, PHILADELPHIA, PA. | 560 | 1373.426 | 177.625 | 723.209 | 33.546 | 18.244 | 33.546 | 18.244 |
| NAVAL AIR TEST CENTER, PATUXENT RIVER, MD. | 6861 | 741.022 | 186.064 | 3994.351 | 114.073 | 40.634 | 114.073 | 40.634 |
| NAVAL AIR TEST FACILITY, LAKEHURST, N. J. | 2502 | 59.284 | 30.498 | 91.906 | 32.621 | 7.132 | 32.621 | 7.132 |
| NAVAL AIR PROPULSION TEST CENTER, TRENTON, N. J. | 66 | 410.900 | 51.000 | 135.220 | 44.293 | 13.191 | 44.293 | 13.191 |
| NAVAL BLOOD RESEARCH LAB., N. H., CHELSEA, MASS. | 1 | 6.263 | 0.161 | 1.000 | 0.115 | 0.429 | 0.115 | 0.429 |
| NAVAL CIVIL ENGINEERING LABORATORY, PORT HUENEME, CAL. | 22 | 120.352 | 21.977 | 31.548 | 5.118 | 3.064 | 5.118 | 3.064 |
| NAVY CLOTHING AND TEXTILE RESEARCH UNIT, NATICK, MASS. | 2 | 10.000 | 7.000 | 3.000 | 0.275 | 0.500 | 0.275 | 0.500 |
| NAVAL DENTAL RESEARCH INST., NTC, GREAT LAKES, ILL | 0 | 6.997 | 0.897 | 0.664 | 0.000 | 0.319 | 0.000 | 0.319 |
| NAVAL ELECTRONICS LABORATORY CENTER, SAN DIEGO, CALIF. | 1987 | 457.011 | 152.725 | 225.383 | 11.898 | 33.771 | 11.898 | 33.771 |
| NAVY ELECTRONIC SYST. TEST-EVAL. FAC, PATUXENT RIVER, MD. | 852 | 22.944 | 2.502 | 14.195 | 3.342 | 4.518 | 3.342 | 4.518 |
| NAVAL ENVIRON PREDICTION RSCH. FACILITY MONTEREY, CAL. | 0 | 0.000 | 0.843 | 6.351 | 0.000 | 0.070 | 0.000 | 0.070 |
| NAVAL EXPL. ORD. DISPOSAL FAC., INDIAN HEAD, MD. | 1004 | 33.151 | 17.287 | 70.551 | 4.747 | 1.055 | 4.747 | 1.055 |
| NAVAL MEDICAL FIELD RESEARCH LAB., CAMP LEJEUNE, N.C. | 3 | 28.226 | 8.655 | 15.590 | 0.490 | 0.600 | 0.490 | 0.600 |
| NAVAL MEDICAL RESEARCH INSTITUTE, NMMC, BETHESDA | 4 | 151.730 | 21.561 | 26.590 | 3.993 | 0.542 | 3.993 | 0.542 |
| NAVAL MEDICAL RESEARCH UNIT NO.1, BERKELEY, CALIF. | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.296 | 0.000 | 0.296 |
| NAVAL MEDICAL RESEARCH UNIT NO.2, TAIPEI, TAIWAN | 2 | 65.332 | 21.800 | 0.600 | 0.000 | 0.781 | 0.000 | 0.781 |
| NAVAL MEDICAL RESEARCH UNIT NO.3, CAIRO, EGYPT | 5 | 43.420 | 6.610 | 16.437 | 0.686 | 0.000 | 0.686 | 0.000 |
| NAVAL MEDICAL RESEARCH UNIT NO.4, GREAT LAKES, ILL | 1 | 28.782 | 11.576 | 13.649 | 0.327 | 0.397 | 0.327 | 0.397 |
| NAVY MED. NEUROPSYCHIATRIC RES. UNIT, SAN DIEGO, CAL. | 0 | 11.177 | 4.500 | 0.000 | 0.000 | 0.221 | 0.000 | 0.221 |
| NAVAL MISSILE CENTER, POINT MUGU, CALIF. | 4 | 110.756 | 160.569 | 698.391 | 22.024 | 36.058 | 22.024 | 36.058 |
| PACIFIC MISSILE RANGE, POINT MUGU, CALIF. | 29600 | 93.463 | 271.479 | 1390.796 | 138.000 | 162.700 | 138.000 | 162.700 |
| NAVAL ORDNANCE LABORATORY, WHITE OAK, MD. | 1059 | 311.167 | 102.543 | 1019.410 | 46.207 | 32.595 | 46.207 | 32.595 |
| NAVAL ORD. MISSILE TEST FAC., WHITE SANDS, N. MEX. | 112 | 84.742 | 30.719 | 230.239 | 6.590 | 3.312 | 6.590 | 3.312 |
| NAVAL PERSONNEL RESEARCH ACTIVITY, SAN DIEGO, CALIF. | 1 | 47.300 | 4.900 | 0.000 | 0.210 | 0.277 | 0.210 | 0.277 |
| NAVAL PERSONNEL RSCH AND DEVELOPMENT LAB, WASH., D. C. | 0 | 22.156 | 2.703 | 1.420 | 0.652 | 0.400 | 0.652 | 0.400 |
| NAVAL RESEARCH LABORATORY, WASHINGTON, D.C. | 2049 | 1544.718 | 102.791 | 645.856 | 76.107 | 58.124 | 76.107 | 58.124 |
| NAVAL SHIP RESEARCH AND DEVELOPMENT CTR., WASH., D.C. | 975 | 559.910 | 203.006 | 1779.348 | 79.474 | 49.042 | 79.474 | 49.042 |
| NAVY SPACE SYSTEMS ACTIVITY, LOS ANGELES, CALIF. | 0 | 0.000 | 6.000 | 0.000 | 0.000 | 0.025 | 0.000 | 0.025 |
| NAVAL SUBMARINE MED. RSCH LAB, NEW LONDON, GROTON, CT | 0 | 27.160 | 10.382 | 18.279 | 0.000 | 1.250 | 0.000 | 1.250 |
| NAVY TOXICOLOGY UNIT, NMMC, BETHESDA, MD. | 0 | 2.268 | 0.148 | 1.416 | 0.187 | 0.438 | 0.187 | 0.438 |
| NAVAL TRAINING DEVICES CENTER, ORLANDO, FLA. | 60 | 93.500 | 201.356 | 123.346 | 2.850 | 4.401 | 2.850 | 4.401 |
| NAVAL UNDERSEA R+O CENTER, SAN DIEGO, CALIF. | 37615 | 331.944 | 33.457 | 666.654 | 36.703 | 44.548 | 36.703 | 44.548 |
| NAVAL UNDERWATER SYSTEMS CENTER, NEWPORT, R.I. | 338 | 480.273 | 200.987 | 581.202 | 28.158 | 19.859 | 28.158 | 19.859 |
| NAVAL UNIT, FORT DETRICK, FREDERICK, MD. | 0 | 0.000 | 2.025 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 |
| NAVAL WEAPONS CENTER, CHINA LAKE, CALIF. | 1092920 | 1310.547 | 169.566 | 5095.200 | 227.607 | 82.099 | 227.607 | 82.099 |
| NAVAL WEAPONS EVALUATION FACILITY, ALBUQUERQUE, N.MEX | 4 | 17.942 | 17.942 | 91.114 | 6.000 | 0.409 | 6.000 | 0.409 |
| NAVAL WEAPONS LABORATORY, DAHLGREN, VA. | 4498 | 541.641 | 76.042 | 933.132 | 64.979 | 30.977 | 64.979 | 30.977 |
| TOTALS | 1285217 | 10182.847 | 2556.763 | 18452.035 | 1023.953 | 696.029 | 1023.953 | 696.029 |

TABLE 5. AIR FORCE RDT+E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1971

| INSTALLATION | FUNDING DATA (MILLIONS \$) | | | PERSONNEL DATA | | | | | | | | | |
|--|----------------------------|----------|---------|----------------|----------|-------|-----------|---------|---------|----------|----------|-----------|-----------|
| | TOTAL | IN-HOUSE | ROT+E | TOTAL | IN-HOUSE | ROT+E | TOTAL MIL | PHO CIV | PHO MIL | PROF CIV | PROF MIL | TOTAL CIV | TOTAL MIL |
| AEROPROPULSION LAB., WPAFB, OHIO | 52.638 | 4.393 | 52.638 | 8.130 | 8.130 | 0 | 58 | 3 | 2 | 5 | 8 | 331 | 2 |
| AEROSPACE MEDICAL LAB. (CLINICAL), LACKLAND AFB, TEX | 0.392 | 0.392 | 0 | 0.130 | 0.130 | 0 | 28 | 23 | 28 | 71 | 99 | 168 | 0 |
| 6578 AEROSPACE MEDICAL RES. LAB., WPAFB, OHIO | 12.414 | 6.173 | 10.935 | 4.694 | 4.694 | 0 | 133 | 12 | 58 | 55 | 117 | 227 | 12 |
| AEROSPACE RESEARCH LABORATORIES, WPAFB, OHIO | 13.591 | 9.815 | 12.581 | 8.805 | 8.805 | 0 | 79 | 15 | 21 | 429 | 610 | 2998 | 15 |
| AEROSPACE RESEARCH LABORATORIES, WPAFB, OHIO | 329.678 | 99.598 | 185.651 | 52.763 | 52.763 | 0 | 4965 | 140 | 3 | 67 | 47 | 103 | 3 |
| ARMAMENT DEVELOP. + TEST CENTER, ELGIN AFB, FLA. | 56.211 | 1.311 | 51.437 | 0.800 | 0.800 | 0 | 91 | 584 | 7 | 11 | 90 | 584 | 7 |
| ARNOLD ENGINEERING DEVELOPMENT CENTER, TENN. | 92.154 | 9.835 | 90.818 | 6.499 | 6.499 | 0 | 179 | 1057 | 12 | 150 | 68 | 1057 | 12 |
| AVIONICS LAB., WPAFB, OHIO | 59.878 | 33.818 | 56.292 | 31.058 | 31.058 | 0 | 1726 | 2104 | 44 | 1 | 482 | 2104 | 44 |
| CAMBRIDGE RESEARCH LABS., L.G. HANSCOM FLD., MASS. | 205.608 | 45.715 | 154.856 | 23.556 | 23.556 | 0 | 136 | 720 | 15 | 29 | 97 | 720 | 15 |
| EASTERN TEST RANGE, PATRICK AFB, FLA. | 61.946 | 15.748 | 60.668 | 15.748 | 15.748 | 0 | 3121 | 1828 | 62 | 0 | 647 | 1828 | 62 |
| FLIGHT DYNAMICS LAB., WPAFB, OHIO | 68.856 | 59.248 | 41.498 | 33.852 | 33.852 | 0 | 25 | 13 | 16 | 1 | 18 | 13 | 16 |
| FLIGHT TEST CENTER, EDWARDS AFB, CALIF. | 1.601 | 1.601 | 0.635 | 0.635 | 0.635 | 0 | 134 | 207 | 10 | 27 | 72 | 207 | 10 |
| FRANK J. SEILER RESEARCH LAB., ACADEMY, COLO. | 10.333 | 3.882 | 9.355 | 2.904 | 2.904 | 0 | 57 | 357 | 13 | 47 | 66 | 357 | 13 |
| HUMAN RESOURCES LAB., BROOKS AFB, TEX. | 54.352 | 5.904 | 37.752 | 5.104 | 5.104 | 0 | 267 | 384 | 15 | 11 | 107 | 384 | 15 |
| MATERIALS LAB., WPAFB, OHIO | 28.707 | 12.564 | 26.407 | 10.264 | 10.264 | 0 | 324 | 1177 | 1 | 16 | 184 | 1177 | 1 |
| ROCKET PROPULSION LAB., EDWARDS AFB, CALIF. | 157.467 | 32.882 | 81.733 | 26.155 | 26.155 | 0 | 585 | 494 | 0 | 1 | 249 | 494 | 0 |
| ROME AIR DEVELOPMENT CENTER, GRIFFIS AFB, N.Y. | 80.800 | 37.350 | 73.680 | 31.830 | 31.830 | 0 | 683 | 406 | 93 | 41 | 206 | 406 | 93 |
| SPACE + MISSILE TEST CENTER, VANDERBURG AFB, CALIF. | 18.893 | 15.921 | 11.221 | 8.275 | 8.275 | 0 | 888 | 454 | 84 | 18 | 595 | 454 | 84 |
| USAF SCHOOL OF AEROSPACE MED., BROOKS AFB, TEX. | 76.216 | 35.221 | 67.226 | 26.231 | 26.231 | 0 | 13414 | 13574 | 428 | 468 | 3563 | 13574 | 428 |
| WEAPONS LAB., KIRTLAND AFB, N.M. | 1388.135 | 429.743 | 945.513 | 293.296 | 293.296 | 0 | 13414 | 13574 | 428 | 468 | 3563 | 13574 | 428 |
| TOTALS | | | | | | | | | | | | | |

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TABLE 6. AIR FORCE ROT+E FACILITIES DATA, FY 1971

| INSTALLATION | ACRES | SPACE (THOUSANDS OF SQUARE FEET) | | | SPACE AND PROPERTY | | COST (MILLIONS \$) | |
|--|--------|----------------------------------|----------|-----------|--------------------|-------|--------------------|-----------|
| | | LABORATORY | ADMIN | OTHER | LABORATORY | ADMIN | REAL PROPERTY | EQUIPMENT |
| AEROPROPULSION LAB., WPAFB, OHIO | 40 | 309.500 | 56.500 | 274.775 | | | 12.894 | 16.713 |
| AEROSPACE MEDICAL LAB. (CLINICAL), LACKLAND AFB, TEX | 1 | 7.587 | 1.467 | 2.200 | | | 0.140 | 0.849 |
| 6570 AEROSPACE MEDICAL RES. LAB., WPAFB, OHIO | 30 | 211.900 | 10.000 | 15.200 | | | 11.570 | 15.484 |
| AEROSPACE RESEARCH LABORATORIES, WPAFB, OHIO | 50 | 134.207 | 28.512 | 34.719 | | | 10.543 | 11.861 |
| ARMAMENT DEVELOP. + TEST CENTER, ELGIN AFB, FLA. | 464741 | 682.324 | 846.537 | 6942.749 | | | 195.803 | 248.455 |
| ARNOLD ENGINEERING DEVELOPMENT CENTER, TENN. | 40117 | 1138.678 | 201.411 | 525.148 | | | 355.856 | 56.219 |
| AVIONICS LAB., WPAFB, OHIO | 265 | 224.287 | 5.304 | 271.253 | | | 20.872 | 34.478 |
| CAMBRIDGE RESEARCH LABS., L.G. HANSCOM FLD., MASS. | 947 | 611.201 | 19.708 | 125.916 | | | 20.500 | 60.268 |
| EASTERN TEST RANGE, PATRICK AFB, FLA. | 18222 | 133.860 | 385.767 | 7916.900 | | | 372.053 | 648.499 |
| FLIGHT DYNAMICS LAB., WPAFB, OHIO | 90 | 537.300 | 56.600 | 26.000 | | | 22.930 | 52.750 |
| FLIGHT TEST CENTER, EDWARDS AFB, CALIF. | 300723 | 939.933 | 406.022 | 5908.879 | | | 210.705 | 423.445 |
| FRANK J. SEILER RESEARCH LAB., ACADEMY, COLO. | 0 | 5.394 | 2.860 | 0.240 | | | 1.270 | 1.466 |
| HUMAN RESOURCES LAB., BROOKS AFB, TEX. | 13 | 63.830 | 24.390 | 8.430 | | | 1.857 | 3.976 |
| MATERIALS LAB., WPAFB, OHIO | 9 | 0.213 | 0.022 | 0.038 | | | 6.604 | 9.600 |
| ROCKET PROPULSION LAB., EDWARDS AFB, CALIF. | 54400 | 419.046 | 99.248 | 4.780 | | | 29.572 | 25.653 |
| ROME AIR DEVELOPMENT CENTER, GRIFFIS AFB, N.Y. | 2784 | 741.466 | 112.793 | 187.306 | | | 24.958 | 91.264 |
| SPACE + MISSILE TEST CENTER, VANDENBURG AFB, CALIF. | 45526 | 91.407 | 354.384 | 431.554 | | | 298.980 | 505.933 |
| USAF SCHOOL OF AEROSPACE MED., BROOKS AFB, TEX. | 93 | 442.830 | 93.330 | 58.514 | | | 15.281 | 20.621 |
| WEAPONS LAB., KIRTLAND AFB, N.M. | 1174 | 432.547 | 14.620 | 22.187 | | | 9.913 | 32.340 |
| TOTALS | 929225 | 7129.510 | 2729.475 | 22757.187 | | | 1626.260 | 2259.874 |

TABLE 7. DOD ROT&E ACTIVITIES, PROGRAM AND PERSONNEL DATA, FY 1971

| TABLE 7. DOD ROTBE ACTIVITIES, FISCAL YEAR 1967 | | | | | | | | | | | | |
|---|----------------------------|-------|----------|-------|----------------|-------|-----|-----|----|------|----|--|
| | FUNDING DATA (MILLIONS \$) | | | | PERSONNEL DATA | | | | | | | |
| | TOTAL | | IN-HOUSE | | TOTAL MIL | TOTAL | | PHD | | PROF | | |
| | IN-HOUSE | | ROT+E | | | CIV | | MIL | | CIV | | |
| | 3.719 | 3.719 | 2.905 | 2.905 | | 67 | 147 | 17 | 13 | 38 | 39 | |
| INSTALLATION | | | | | | | | | | | | |
| ARMED FORCES | | | | | | | | | | | | |
| RADIOBIOLOGY RES. INSTITUTE BETHESDA, MD | | | | | | | | | | | | |
| TOTALS | 3.719 | 3.719 | 2.905 | 2.905 | 67 | 147 | 17 | 13 | 38 | 39 | | |

TABLE 7A. DOD ROT&E FACILITIES DATA, FY 1971

| | SPACE AND PROPERTY | | | | COST (MILLIONS \$) | |
|--|----------------------------------|--------|--------|--------|--------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | REAL | | PROPERTY EQUIPMENT | |
| | LABORATORY | | ADMIN | | 6.135 | |
| | 12 | 24.660 | 14.906 | 32.913 | 6.135 | 2.551 |
| INSTALLATION | | | | | | |
| ARMED FORCES | | | | | | |
| RADIOBIOLOGY RES. INSTITUTE BETHESDA, MD | | | | | | |
| TOTALS | 12 | 24.660 | 14.906 | 32.913 | 6.135 | 2.551 |

SUMMARY

DEPARTMENT OF DEFENSE R+D LABORATORIES

PROGRAM DATA FOR FY 1971 (ACTUAL)

| | |
|---------------------------------|---------------|
| | (MILLIONS \$) |
| TOTAL ANNUAL LABORATORY PROGRAM | 2493.844 |
| TOTAL INHOUSE PROGRAM | 1438.767 |
| TOTAL RDT+E PROGRAM | 1694.367 |
| TOTAL INHOUSE RDT+E | 967.616 |
| TOTAL ANNUAL OPERATING COST | 351.805 |

PERSONNEL DATA (END OF FY 1971)

| PERSONNEL | AUTHORIZED STRENGTH | TOTAL PHD | TOTAL PROFESSIONALS |
|-----------|------------------------|--------------|------------------------|
| MILITARY | 8160 | 815 | 3891 |
| CIVILIAN | 56986 | 2557 | 24240 |
| TOTAL | 65146 | 3372 | 28131 |

PHYSICAL FACILITIES (END OF FY 1971)

| | |
|----------------------------|-----------|
| ACRES..... | 1241343 |
| SPACE (THOUSANDS OF SQ FT) | |
| LABORATORY..... | 21530.634 |
| ADMINISTRATIVE..... | 4765.714 |
| OTHER..... | 19615.388 |
| TOTAL..... | 45911.735 |
| COST (MILLIONS \$) | |
| REAL PROPERTY..... | 1241.491 |
| EQUIPMENT..... | 1248.563 |
| TOTAL..... | 2490.054 |

TABLE 1A. ARMY R+D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1971

| INSTALLATION | FUNDING DATA (MILLIONS \$) | | | | PERSONNEL DATA | | | | | | | | | |
|--|----------------------------|----------|---------|---------|----------------|----------|-------|-------|-----|-----|------|------|------|------|
| | TOTAL | IN-HOUSE | TOTAL | RDT+E | TOTAL | IN-HOUSE | TOTAL | CIV | MIL | PHD | PHD | PROF | PROF | CIV |
| | | | | | | | | | | | | | | |
| AEROMEDICAL RESEARCH LAB., FT. RUCKER, ALA. | 1.550 | 1.550 | 1.550 | 1.029 | 1.029 | 1.029 | 48 | 23 | 17 | 1 | 43 | 2 | 2 | 2 |
| AIR MOBILITY RSCH AND DEVEL LAB. MOFFETT FIELD, CALIF | 37.089 | 24.113 | 37.026 | 24.050 | 24.050 | 24.050 | 55 | 551 | 1 | 19 | 33 | 230 | 230 | 230 |
| ARMY MATERIAL SYST AND ANAL AGENCY, ABERDEEN P.G., MD. | 13.856 | 8.261 | 12.041 | 7.179 | 7.179 | 7.179 | 13 | 314 | 0 | 0 | 13 | 238 | 238 | 238 |
| ATMOSPHERIC SCIENCE LAB. WHITE SANDS, NEW MEXICO | 12.799 | 10.716 | 10.023 | 7.940 | 7.940 | 7.940 | 516 | 253 | 0 | 10 | 12 | 114 | 114 | 114 |
| AVIONICS LABORATORY, FORT MONMOUTH, N.J. | 14.285 | 11.013 | 11.249 | 8.118 | 8.118 | 8.118 | 30 | 209 | 1 | 4 | 29 | 144 | 144 | 144 |
| BALLISTIC RES. LABS., ABERDEEN PROVING GROUND, MD. | 24.985 | 19.309 | 24.379 | 18.718 | 18.718 | 18.718 | 76 | 724 | 12 | 73 | 73 | 403 | 403 | 403 |
| BEHAVIORAL SCIENCE RES. LAB., WASH., D.C. | 2.721 | 1.951 | 2.721 | 1.951 | 1.951 | 1.951 | 4 | 83 | 0 | 24 | 1 | 57 | 57 | 57 |
| BIOLOGICAL LABS., FT. DETRICK, MD. | 20.835 | 20.713 | 18.547 | 18.425 | 18.425 | 18.425 | 77 | 210 | 5 | 23 | 33 | 92 | 92 | 92 |
| COATING AND CHEMICAL LAB., ABERDEEN PROVING GROUND, MD | 2.827 | 1.412 | 2.591 | 1.215 | 1.215 | 1.215 | 5 | 44 | 1 | 2 | 6 | 24 | 24 | 24 |
| COLD REGIONS RSCH + ENGR LAB, HANOVER, N. H. | 6.266 | 5.393 | 5.502 | 4.695 | 4.695 | 4.695 | 41 | 218 | 4 | 21 | 61 | 80 | 80 | 80 |
| COMBAT SURVEILLANCE GROUP, FT. MONMOUTH, NJ. | 9.370 | 1.095 | 9.370 | 1.095 | 1.095 | 1.095 | 67 | 283 | 2 | 6 | 16 | 183 | 183 | 183 |
| COMMUNICATIONS + ADP LAB. FORT MONMOUTH, N.J. | 31.089 | 15.307 | 30.784 | 15.002 | 15.002 | 15.002 | 33 | 355 | 0 | 7 | 21 | 245 | 245 | 245 |
| CONSTRUCTION ENGR. RESEARCH LAB., URBANA, ILL. | 4.028 | 3.533 | 3.484 | 3.029 | 3.029 | 3.029 | 3 | 141 | 2 | 19 | 12 | 63 | 63 | 63 |
| EDGEWOOD ARSENAL LABS., EDGEWOOD ARSENAL, MD | 41.944 | 37.490 | 29.504 | 25.050 | 25.050 | 25.050 | 208 | 1322 | 54 | 62 | 139 | 538 | 538 | 538 |
| ELECTRONIC TECHNOLOGY + DEVICES LAB, FT MONMOUTH, N.J. | 25.903 | 14.000 | 25.733 | 13.838 | 13.838 | 13.838 | 17 | 452 | 9 | 52 | 14 | 303 | 303 | 303 |
| ELECTRONIC WARFARE LAB, FT MONMOUTH, N.J. | 8.600 | 0.600 | 0.600 | 0.600 | 0.600 | 0.600 | 89 | 328 | 1 | 13 | 16 | 176 | 176 | 176 |
| ENGINEER TOPOGRAPHIC LAB., FT BELVOIR, VA. | 11.013 | 5.144 | 10.853 | 4.984 | 4.984 | 4.984 | 15 | 239 | 1 | 13 | 16 | 137 | 137 | 137 |
| ENGINEER WATERWAYS EXPERIMENT STA., VICKSBURG, MISS. | 19.511 | 18.722 | 10.919 | 10.130 | 10.130 | 10.130 | 36 | 1188 | 2 | 33 | 43 | 323 | 323 | 323 |
| FRANKFORD ARS' AL LABS., PHILA., PA. | 29.203 | 21.307 | 25.150 | 17.254 | 17.254 | 17.254 | 18 | 1567 | 1 | 29 | 17 | 691 | 691 | 691 |
| HARRY DIAMOND LABS., WASH., D.C. | 54.649 | 28.996 | 26.293 | 18.807 | 18.807 | 18.807 | 10 | 1362 | 1 | 42 | 11 | 481 | 481 | 481 |
| HUMAN ENG. LABS., ABERDEEN PROVING GROUND, MD. | 3.036 | 2.535 | 2.944 | 2.443 | 2.443 | 2.443 | 33 | 93 | 1 | 10 | 24 | 51 | 51 | 51 |
| INST.OF DENTAL RSCH, WALTER REED AMC, WASH., D.C. | 1.122 | 1.122 | 0.525 | 0.525 | 0.525 | 0.525 | 57 | 25 | 3 | 1 | 48 | 24 | 24 | 24 |
| INST.OF SURGICAL RSCH, BROOKS AMC, FT SAM HOUSTON, TEX. | 2.576 | 2.576 | 1.302 | 1.300 | 1.300 | 1.300 | 116 | 75 | 22 | 3 | 42 | 21 | 21 | 21 |
| LAND WARFARE LAB, ABERDEEN P.G., MD. | 7.164 | 4.563 | 6.303 | 3.898 | 3.898 | 3.898 | 18 | 124 | 0 | 3 | 15 | 57 | 57 | 57 |
| LETTERMAN ARMY INST.OF RSCH. PRESIDIO OF SAN FRAN, CAL. | 8.360 | 8.360 | 0.666 | 0.666 | 0.666 | 0.666 | 86 | 19 | 22 | 3 | 62 | 9 | 9 | 9 |
| MATERIALS AND MECHANICS RSCH CENTER WATERTOWN, MASS. | 22.812 | 9.717 | 12.847 | 7.886 | 7.886 | 7.886 | 12 | 610 | 6 | 61 | 12 | 214 | 214 | 214 |
| MEDICAL BICMECHANICAL RES. LAB., W. REED AMC, WASH DC | 0.750 | 0.750 | 0.637 | 0.637 | 0.637 | 0.637 | 17 | 30 | 3 | 4 | 13 | 14 | 14 | 14 |
| MEDICAL EQUIP. R+D LAB., FT. TOTTEN, FLUSHING, N.Y. | 0.791 | 0.791 | 0.630 | 0.630 | 0.630 | 0.630 | 15 | 39 | 0 | 0 | 8 | 8 | 8 | 8 |
| MED.RSCH OF INFECTIOUS DISEASES, FT. DETRICK, MD. | 5.577 | 4.560 | 3.904 | 2.887 | 2.887 | 2.887 | 344 | 96 | 38 | 9 | 41 | 20 | 20 | 20 |
| MED. RES. AND NUTR. LAB., FITZSIMONS GH, DENVER, COLO. | 3.416 | 3.416 | 2.276 | 2.276 | 2.276 | 2.276 | 113 | 98 | 30 | 12 | 76 | 46 | 46 | 46 |
| MEDICAL RES. LAB. FT. KNOX, KY. | 3.167 | 3.167 | 1.854 | 1.854 | 1.854 | 1.854 | 97 | 110 | 14 | 16 | 70 | 31 | 31 | 31 |
| MEDICAL RESEARCH UNIT, BALBOA HEIGHTS, CANAL ZONE | 0.281 | 0.281 | 0.163 | 0.163 | 0.163 | 0.163 | 9 | 0 | 2 | 0 | 5 | 0 | 0 | 0 |
| MEDICAL RES. UNIT, KUALA LUMPUR, MALAYSIA | 0.241 | 0.241 | 0.182 | 0.182 | 0.182 | 0.182 | 6 | 0 | 5 | 0 | 7 | 0 | 0 | 0 |
| MISSILE COMMAND R+D LABS., REDSTONE ARSENAL, ALA. | 78.738 | 41.991 | 71.635 | 35.251 | 35.251 | 35.251 | 60 | 1067 | 2 | 49 | 75 | 652 | 652 | 652 |
| MOBILITY EQUIP. RES. AND DEVELOP. CENTER, FT BELVOIR, NATICK LABS., NATICK, MASS | 52.768 | 25.195 | 33.741 | 15.915 | 15.915 | 15.915 | 54 | 1306 | 1 | 9 | 44 | 390 | 390 | 390 |
| NIGHT VISION LABORATORY, FORT BELVOIR, VA. | 28.622 | 23.511 | 16.056 | 12.585 | 12.585 | 12.585 | 150 | 1242 | 10 | 95 | 72 | 487 | 487 | 487 |
| PICATINNY ARSENAL LABS., DOVER, N.J. | 32.090 | 16.542 | 30.090 | 16.542 | 16.542 | 16.542 | 30 | 423 | 0 | 33 | 15 | 220 | 220 | 220 |
| RES. INST. OF ENVIRONMENTAL MEDICINE, NATICK, MASS. | 110.000 | 86.215 | 75.600 | 51.815 | 51.815 | 51.815 | 68 | 2575 | 2 | 62 | 59 | 1775 | 1775 | 1775 |
| ROCK ISLAND ARSENAL LABS., ROCK ISLAND, ILL | 3.239 | 3.239 | 2.503 | 2.503 | 2.503 | 2.503 | 84 | 104 | 24 | 21 | 61 | 50 | 50 | 50 |
| TANK-AUTOMOTIVE COMMAND LABS., WARREN, MICH. | 22.195 | 14.216 | 15.394 | 8.416 | 8.416 | 8.416 | 15 | 787 | 1 | 36 | 13 | 320 | 320 | 320 |
| WALTER REED ARMY INST. OF RES., WASH., D.C. | 43.381 | 20.963 | 18.362 | 8.576 | 8.576 | 8.576 | 19 | 978 | 0 | 6 | 20 | 427 | 427 | 427 |
| WATERVLIET ARSENAL LABS., WATERVLIET, N.Y. | 17.824 | 17.824 | 11.387 | 11.387 | 11.387 | 11.387 | 401 | 732 | 165 | 56 | 296 | 347 | 347 | 347 |
| | 16.192 | 15.502 | 6.737 | 6.170 | 6.170 | 6.170 | 4 | 452 | 1 | 42 | 3 | 169 | 169 | 169 |
| TOTALS | 826.869 | 557.915 | 613.530 | 397.616 | 397.616 | 397.616 | 3169 | 20859 | 466 | 976 | 1690 | 9856 | 9856 | 9856 |

TABLE 2A.

ARMY R+D FACILITIES DATA, FY 1971

| INSTALLATION | ACRES | SPACE (THOUSANDS OF SQUARE FEET) | | | COST (MILLIONS \$) | |
|---|-------|----------------------------------|----------|----------|--------------------|-----------|
| | | LABORATORY | ADMIN | OTHER | REAL PROPERTY | EQUIPMENT |
| AEROMEDICAL RESEARCH LAB., FT. RUCKER, ALA. | 0 | 21.495 | 5.940 | 7.470 | 0.203 | 1.340 |
| AIR MOBILITY RSCH AND DEVEL LAB. MOFFETT FIELD, CALIF | 100 | 85.014 | 43.308 | 15.584 | 1.474 | 5.446 |
| ARMY MATERIAL SYST AND ANAL AGENCY, ABERDEEN P.G., MD. | 4 | 41.964 | 10.491 | 34.970 | 1.923 | 4.815 |
| ATMOSPHERIC SCIENCE LAB. WHITE SANDS, NEW MEXICO | 45 | 0.050 | 0.025 | 0.023 | 48.000 | 25.000 |
| AVIONICS LABORATORY, FORT MONMOUTH, N.J. | 25 | 67.149 | 4.378 | 1.706 | 2.604 | 11.980 |
| BALLISTIC RES. LABS., ABERDEEN PROVING GROUND, MD. | 3469 | 298.232 | 74.558 | 248.526 | 12.785 | 19.582 |
| BEHAVIORAL SCIENCE RES. LAB., WASH., D.C. | 0 | 26.816 | 4.367 | 1.893 | 0.000 | 1.905 |
| BIOLOGICAL LABS., FT. DETRICK, MD. | 1220 | 1023.267 | 101.878 | 913.032 | 72.562 | 18.423 |
| COATING AND CHEMICAL LAB., ABERDEEN PROVING GROUND, MD | 1 | 16.385 | 1.868 | 4.508 | 0.501 | 0.642 |
| COLD REGIONS RSCH + ENGR LAB, HANDOVER, N. H. | 631 | 19.013 | 9.848 | 108.415 | 3.906 | 4.133 |
| COMBAT SURVEILLANCE GROUP, FT. MONMOUTH, N.J. | 71 | 95.870 | 7.281 | 18.468 | 2.418 | 15.773 |
| COMMUNICATIONS + ADP LAB. FORT MONMOUTH, N.J. | 12 | 75.305 | 7.389 | 1.015 | 0.000 | 6.987 |
| CONSTRUCTION ENGR. RESEARCH LAB., URBANA, ILL. | 15 | 68.875 | 32.075 | 0.000 | 3.481 | 1.795 |
| EDGEWOOD ARSENAL LABS., EDGEWOOD ARSENAL, MD | 4055 | 679.877 | 122.839 | 103.630 | 19.540 | 10.500 |
| ELECTRONIC TECHNOLOGY + DEVICES LAB, FT MONMOUTH, N.J. | 247 | 163.096 | 4.080 | 4.500 | 5.832 | 11.412 |
| ELECTRONIC WARFARE LAB, FT MONMOUTH, N.J. | 0 | 31.576 | 57.850 | 19.771 | 1.200 | 34.165 |
| ENGINEER TOPOGRAPHIC LAB., FT BELVOIR, VA. | 0 | 47.304 | 9.980 | 2.660 | 0.000 | 9.358 |
| ENGINEER WATERWAYS EXPERIMENT STA., VICKSBURG, MISS. | 1884 | 1379.000 | 383.554 | 230.046 | 14.761 | 22.531 |
| FRANKFORD ARSENAL LABS., PHILA., PA. | 22 | 559.000 | 134.000 | 557.000 | 0.970 | 9.025 |
| HARRY DIAMOND LABS., WASH., D.C. | 2770 | 281.602 | 46.119 | 54.154 | 11.874 | 22.871 |
| HUMAN ENG. LABS., ABERDEEN PROVING GROUND, MD. | 10 | 26.500 | 17.605 | 24.658 | 1.513 | 3.210 |
| INST.OF DENTAL RSCH, WALTER REED AMC, WASH., D.C. | 0 | 7.711 | 4.722 | 1.724 | 0.000 | 0.675 |
| INST.OF SURGICAL RSCH. BROOKE AMC, FT SAM HOUSTON, TEX. | 1 | 18.424 | 0.000 | 19.000 | 1.868 | 0.868 |
| LAND WARFARE LAB, ABERDEEN P.G., MD. | 00 | 39.311 | 2.655 | 12.620 | 0.687 | 0.696 |
| LETTERMAN ARMY INST.OF RSCH. PRESIDIO OF SAN FRANCISCO. | 0 | 60.102 | 8.900 | 0.000 | 0.052 | 2.552 |
| MATERIALS AND MECHANICS RSCH CENTER WATERTOWN, MASS. | 40 | 410.100 | 122.400 | 129.000 | 14.212 | 13.200 |
| MEDICAL BIOMECHANICAL RES. LAB., W. REED AMC, WASH DC | 0 | 11.463 | 1.022 | 0.000 | 0.930 | 0.380 |
| MEDICAL EQUIP. R+D LAB., FT. TOTTEN, FLUSHING, N.Y. | 0 | 7.864 | 3.577 | 31.709 | 0.556 | 0.466 |
| MED.RSCH OF INFECTIOUS DISEASES, FT. DETRICK, MD. | 0 | 71.728 | 13.238 | 105.994 | 8.284 | 1.823 |
| MED. RES. AND NUTR. LAB., FITZSIMONS GH, DENVER, COLO. | 0 | 83.663 | 5.138 | 19.087 | 4.791 | 3.938 |
| MEDICAL RES. LAB. FT. KNOX, KY. | 19 | 86.786 | 5.368 | 26.700 | 0.938 | 3.402 |
| MEDICAL RESEARCH UNIT, BALBOA HEIGHTS, CANAL ZONE | 0 | 5.000 | 0.600 | 0.000 | 0.000 | 0.061 |
| MEDICAL RES. UNIT, KUALA LUMPUR, MALAYSIA | 0 | 7.000 | 0.900 | 0.000 | 0.100 | 0.222 |
| MISSILE COMMAND R+D LABS., REDSTONE ARSENAL, ALA. | 11000 | 898.760 | 140.606 | 71.250 | 25.823 | 25.891 |
| MOBILITY EQUIP. RES. AND DEVELP. CENTER, FT BELVOIR, NATICK LABS., NATICK, MASS | 1060 | 285.697 | 217.336 | 357.645 | 23.197 | 29.602 |
| NIGHT VISION LABORATORY, FORT BELVOIR, VA. | 3087 | 525.000 | 65.900 | 274.600 | 39.024 | 12.458 |
| PICATINNY ARSENAL LABS., DOVER, N.J. | 0 | 73.625 | 29.883 | 67.131 | 4.295 | 36.200 |
| RES. INST. OF ENVIRONMENTAL MEDICINE, NATICK, MASS. | 6495 | 594.642 | 668.245 | 2586.998 | 72.150 | 50.500 |
| ROCK ISLAND ARSENAL LABS., ROCK ISLAND, ILL | 0 | 72.157 | 12.356 | 31.167 | 6.902 | 1.952 |
| TANK-AUTOMOTIVE COMMAND LABS., WARREN, MICH. | 18 | 95.600 | 91.020 | 204.754 | 1.466 | 10.259 |
| WALTER REED ARMY INST. OF RES., WASH., D.C. | 1125 | 315.908 | 0.000 | 0.000 | 13.183 | 10.273 |
| WATERVLIET ARSENAL LABS., WATERVLIET, N.Y. | 1170 | 303.200 | 57.500 | 0.000 | 0.000 | 12.276 |
| | 4 | 216.559 | 23.250 | 0.000 | 2.365 | 3.436 |
| TOTALS | 38696 | 9274.689 | 2554.849 | 6280.216 | 426.371 | 458.031 |

X X

TABLE 3A. NAVY R+D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1971

| INSTALLATION | FUNDING DATA (MILLIONS \$) | | | | PERSONNEL DATA | | | | | | | | | |
|---|----------------------------|----------|----------|----------|----------------|-------------------|--------------|--------------|------------|------------|-------------|-------------|--|--|
| | TOTAL | | IN-HOUSE | | TOTAL RDT+E | IN-HOUSE RDT+E | TOTAL MIL | TOTAL CIV | PHD MIL | PHD CIV | PROF MIL | PROF CIV | | |
| | TOTAL | IN-HOUSE | TOTAL | IN-HOUSE | | | | | | | | | | |
| NAVAL AEROSPACE MEDICAL RESEARCH LAB, PENSACOLA, FLA. | 4,088 | 4,088 | 3,579 | 3,579 | 3,579 | 3,579 | 26 | 114 | 12 | 16 | 17 | 46 | | |
| NAVAL AIR DEVELOPMENT CENTER, JOHNSVILLE, PA. | 93,126 | 57,411 | 61,269 | 36,316 | 427 | 2496 | 13 | 28 | 7 | 12 | 361 | 2 | | |
| NAVAL AIR ENGINEERING CENTER, PHILADELPHIA, PA. | 77,881 | 37,545 | 8,885 | 5,463 | 40 | 2184 | 13 | 3 | 1 | 4 | 2 | 2 | | |
| NAVAL BLOOD RESEARCH LAB., N. H., CHELSEA, MASS. | 0,420 | 0,420 | 0,285 | 0,285 | 15 | 390 | 1 | 31 | 7 | 198 | 24 | 24 | | |
| NAVAL CIVIL ENGINEERING LABORATORY, PORT HUENEME, CAL. | 11,993 | 9,547 | 5,773 | 4,439 | 1 | 66 | 0 | 0 | 1 | 24 | 700 | 8 | | |
| NAVY CLOTHING AND TEXTILE RESEARCH UNIT, NATICK, MASS. | 1,217 | 1,217 | 0,613 | 0,613 | 4 | 20 | 1 | 0 | 3 | 9 | 12 | 79 | | |
| NAVAL ELECTRONICS LABORATORY CENTER, SAN DIEGO, CALIF. | 56,275 | 52,800 | 37,668 | 34,653 | 29 | 52 | 7 | 3 | 42 | 30 | 40 | 7 | | |
| NAVAL ENVIRON. PREDICTION RSCH. FACILITY MONTEREY, CAL. | 0,800 | 0,800 | 0,800 | 0,800 | 173 | 235 | 42 | 30 | 0 | 7 | 1 | 1 | | |
| NAVAL MEDICAL FIELD RESEARCH LAB., CAMP LEJEUNE, N.C. | 1,804 | 1,804 | 0,767 | 0,767 | 16 | 3 | 3 | 0 | 11 | 2 | 16 | 3 | | |
| NAVAL MEDICAL RESEARCH INSTITUTE, NIMC, BETHESDA | 6,748 | 6,748 | 0,039 | 0,039 | 30 | 111 | 7 | 15 | 9 | 44 | 44 | 44 | | |
| NAVAL MEDICAL RESEARCH UNIT NO.1, BERKELEY, CALIF. | 0,209 | 0,209 | 1,376 | 1,376 | 10 | 52 | 9 | 8 | 10 | 21 | 1107 | 99 | | |
| NAVAL MEDICAL RESEARCH UNIT NO.2, TAIPEI, TAIWAN | 1,976 | 1,976 | 1,078 | 1,078 | 34 | 45 | 6 | 2 | 12 | 14 | 21 | 14 | | |
| NAVAL MEDICAL RESEARCH UNIT NO.3, CAIRO, EGYPT | 1,438 | 1,438 | 0,797 | 0,797 | 52 | 2847 | 1 | 121 | 28 | 1107 | 35 | 99 | | |
| NAVAL MEDICAL RESEARCH UNIT NO.4, GREAT LAKES, ILL. | 1,251 | 1,251 | 0,890 | 0,890 | 35 | 163 | 0 | 30 | 35 | 99 | 43 | 150 | | |
| NAVY MED. NEUROPSYCHIATRIC RES. UNIT, SAN DIEGO, CAL. | 1,129 | 1,129 | 51,384 | 34,988 | 88 | 3705 | 3 | 376 | 11 | 1456 | 40 | 1449 | | |
| NAVAL ORDNANCE LABORATORY, WHITE OAK, MD. | 76,957 | 57,295 | 3,204 | 3,204 | 25 | 55 | 8 | 11 | 14 | 38 | 283 | 283 | | |
| NAVAL PERSONNEL RESEARCH ACTIVITY, SAN DIEGO, CALIF. | 3,777 | 3,777 | 2,529 | 2,529 | 50 | 1128 | 1 | 10 | 39 | 39 | 33 | 652 | | |
| NAVAL PERSONNEL RSCH AND DEVELOPMENT LAB, WASH., D. C. | 3,800 | 3,800 | 96,161 | 90,780 | 304 | 1621 | 0 | 85 | 24 | 1313 | 53 | 1358 | | |
| NAVAL RESEARCH LABORATORY, WASHINGTON, D.C. | 112,291 | 106,832 | 87,709 | 58,181 | 177 | 3581 | 6 | 113 | 40 | 1449 | 38 | 38 | | |
| NAVAL SHIP RESEARCH AND DEVELOPMENT CTR., WASH., D.C. | 116,971 | 78,330 | 87,709 | 58,181 | 25 | 55 | 8 | 11 | 14 | 38 | 283 | 283 | | |
| NAVAL SUBMARINE MED. RSCH LAB, NEW LONDON, GROTON, CTNN | 1,447 | 1,447 | 13,564 | 11,561 | 304 | 1621 | 0 | 85 | 24 | 1313 | 53 | 1358 | | |
| NAVAL TRAINING DEVICES CENTER, ORLANDO, FLA. | 72,256 | 23,898 | 40,081 | 27,311 | 109 | 2936 | 0 | 60 | 53 | 1358 | 958 | 958 | | |
| NAVAL UNDERSEA R+D CENTER, SAN DIEGO, CALIF. | 79,669 | 53,255 | 39,288 | 26,372 | 729 | 4308 | 0 | 109 | 25 | 25 | 25 | 25 | | |
| NAVAL UNDERWATER SYSTEMS CENTER, NEWPORT, R.I. | 97,521 | 59,631 | 83,405 | 52,246 | 100 | 2703 | 1 | 60 | 718 | 11417 | 718 | 11417 | | |
| NAVAL WEAPONS CENTER, CHINA LAKE, CALIF. | 151,514 | 51,556 | 83,405 | 52,246 | 100 | 2703 | 1 | 60 | 718 | 11417 | 718 | 11417 | | |
| NAVAL WEAPONS LABORATORY, DAHLGREN, VA. | 71,288 | 54,582 | 28,263 | 22,933 | 2680 | 30523 | 138 | 1180 | 718 | 11417 | 718 | 11417 | | |
| TOTALS | 1045,286 | 710,304 | 573,667 | 426,180 | 2680 | 30523 | 138 | 1180 | 718 | 11417 | 718 | 11417 | | |

TABLE 4A. NAVY R+D FACILITIES DATA, FY 1971

| INSTALLATION | ACRES | SPACE (THOUSANDS OF SQUARE FEET) | | | | COST (MILLIONS \$) | |
|---|---------|----------------------------------|----------|-----------|---------------|--------------------|--|
| | | LABORATORY | ADMIN | OTHER | REAL PROPERTY | EQUIPMENT | |
| NAVAL AEROSPACE MEDICAL RESEARCH LAB, PENSACOLA, FLA. | 0 | 96.787 | 9.684 | 14.893 | 0.000 | 1.654 | |
| NAVAL AIR DEVELOPMENT CENTER, JOHNSVILLE, PA. | 750 | 883.839 | 55.671 | 413.324 | 22.163 | 37.897 | |
| NAVAL AIR ENGINEERING CENTER, PHILADELPHIA, PA. | 500 | 1373.426 | 177.625 | 723.209 | 33.546 | 18.244 | |
| NAVAL BLOOD RESEARCH LAB., N. H., CHELSEA, MASS. | 1 | 6.263 | 0.161 | 1.000 | 0.115 | 0.429 | |
| NAVAL CIVIL ENGINEERING LABORATORY, PORT HUENEME, CAL. | 22 | 120.352 | 21.977 | 31.548 | 5.118 | 3.064 | |
| NAVY CLOTHING AND TEXTILE RESEARCH UNIT, NATICK, MASS. | 2 | 13.000 | 7.000 | 3.000 | 0.275 | 0.500 | |
| NAVAL ELECTRONICS LABORATORY CENTER, SAN DIEGO, CALIF. | 1987 | 457.011 | 152.725 | 225.883 | 11.898 | 33.971 | |
| NAVAL ENVIRON PREDICTION RSCH. FACILITY MONTEREY, CAL. | 0 | 0.006 | 0.843 | 6.351 | 0.000 | 0.070 | |
| NAVAL MEDICAL FIELD RESEARCH LAB., CAMP LEJEUNE, N.C. | 3 | 28.226 | 8.655 | 15.590 | 0.490 | 0.600 | |
| NAVAL MEDICAL RESEARCH INSTITUTE, NMMC, BETHESDA | 4 | 151.730 | 21.561 | 26.590 | 3.993 | 0.542 | |
| NAVAL MEDICAL RESEARCH UNIT NO.1, BERKELEY, CALIF. | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.296 | |
| NAVAL MEDICAL RESEARCH UNIT NO.2, TAIPEI, TAIWAN | 2 | 65.332 | 21.800 | 0.000 | 0.000 | 0.781 | |
| NAVAL MEDICAL RESEARCH UNIT NO.3, CAIRO, EGYPT | 5 | 43.420 | 6.610 | 16.437 | 0.606 | 0.000 | |
| NAVAL MEDICAL RESEARCH UNIT NO.4, GREAT LAKES, ILL | 1 | 28.702 | 11.576 | 13.649 | 0.387 | 0.397 | |
| NAVY MED. NEUROPSYCHIATRIC RES. UNIT, SAN DIEGO, CAL. | 0 | 11.177 | 4.500 | 0.000 | 0.000 | 0.221 | |
| NAVAL ORDNANCE LABORATORY, WHITE OAK, MD. | 1059 | 311.167 | 182.543 | 1019.410 | 46.207 | 32.595 | |
| NAVAL PERSONNEL RESEARCH ACTIVITY, SAN DIEGO, CALIF. | 1 | 47.300 | 4.900 | 0.000 | 0.210 | 0.277 | |
| NAVAL PERSONNEL RSCH AND DEVELOPMENT LAB, WASH., D. C. | 0 | 22.156 | 2.703 | 1.424 | 0.652 | 0.400 | |
| NAVAL RESEARCH LABORATORY, WASHINGTON, D.C. | 2049 | 1544.718 | 182.791 | 645.850 | 76.107 | 58.124 | |
| NAVAL SHIP RESEARCH AND DEVELOPMENT CTR., WASH., D.C. | 975 | 550.910 | 203.006 | 1779.348 | 79.474 | 49.842 | |
| NAVAL SUBMARINE MED. RSCH LAB, NEW LONDON, GROTON, CONN | 0 | 27.160 | 10.382 | 18.279 | 0.000 | 1.250 | |
| NAVAL TRAINING DEVICES CENTER, ORLANDO, FLA. | 60 | 93.580 | 201.356 | 123.346 | 2.850 | 4.401 | |
| NAVAL UNDERSEA R+D CENTER, SAN DIEGO, CALIF. | 37615 | 331.944 | 33.457 | 666.854 | 36.703 | 44.540 | |
| NAVAL UNDERSEA R+D CENTER, SAN DIEGO, CALIF. | 338 | 488.273 | 200.907 | 581.202 | 28.158 | 19.859 | |
| NAVAL WEAPONS CENTER, CHINA LAKE, CALIF. | 1092920 | 1310.547 | 169.566 | 5095.208 | 227.607 | 82.899 | |
| NAVAL WEAPONS LABORATORY, DAHLGREN, VA. | 4490 | 541.641 | 76.642 | 933.132 | 64.979 | 30.977 | |
| TOTALS | 1142844 | 8555.467 | 1768.841 | 12356.129 | 641.538 | 423.833 | |

TABLE 5A. AIR FORCE R+D LABORATORIES, PROGRAM AND PERSONNEL DATA, FY 1971

| INSTALLATION | FUNDING DATA (MILLIONS \$) | | | | PERSONNEL DATA | | | | | | | | | |
|--|----------------------------|----------|----------|----------|----------------|----------|---------|------|-------|-----|------|------|------|------|
| | TOTAL | | IN-HOUSE | | TOTAL | IN-HOUSE | RDT+E | MIL | TOTAL | | | | PROF | CIV |
| | TOTAL | IN-HOUSE | TOTAL | IN-HOUSE | | | | | MIL | CIV | PHD | PHD | | |
| AEROPROPULSION LAB., WPAFB, OHIO | 52.638 | 4.393 | 52.638 | 4.393 | 58 | 28 | 0.130 | 331 | 2 | 2 | 5 | 8 | 168 | 8 |
| AEROSPACE MEDICAL LAB. (CLINICAL), LACKLAND AFB, TEX | 0.392 | 0.392 | 0.130 | 0.130 | 133 | 79 | 4.694 | 169 | 23 | 28 | 71 | 55 | 117 | 99 |
| 6570 AEROSPACE MEDICAL RES. LAB., WPAFB, OHIO | 12.614 | 6.173 | 10.935 | 8.005 | 133 | 91 | 8.005 | 227 | 12 | 58 | 11 | 90 | 291 | 117 |
| AEROSPACE RESEARCH LABORATORIES, WPAFB, OHIO | 13.591 | 9.815 | 12.581 | 8.499 | 179 | 136 | 31.058 | 504 | 7 | 11 | 150 | 68 | 612 | 419 |
| AVIONICS LAB., WPAFB, OHIO | 92.154 | 33.818 | 90.818 | 15.748 | 179 | 136 | 15.748 | 1057 | 10 | 15 | 29 | 97 | 419 | 3 |
| CAMBRIDGE RESEARCH LABS., L.G. HANSCOM FLD., MASS. | 59.878 | 15.748 | 56.292 | 8.635 | 136 | 136 | 8.635 | 720 | 15 | 16 | 1 | 18 | 3 | 3 |
| FLIGHT DYNAMICS LAB., WPAFB, OHIO | 61.946 | 1.681 | 60.668 | 2.984 | 136 | 136 | 2.984 | 15 | 15 | 10 | 27 | 73 | 82 | 82 |
| FRANK J. SETTLER RESEARCH LAB., ACADEMY, COLO. | 10.333 | 3.882 | 9.355 | 5.104 | 57 | 57 | 5.104 | 207 | 13 | 47 | 66 | 252 | 252 | 252 |
| HUMAN RESOURCES LAB., BROOKS AFB, TEX. | 54.352 | 5.984 | 37.752 | 10.264 | 267 | 267 | 10.264 | 357 | 15 | 11 | 107 | 113 | 113 | 113 |
| MATERIALS LAB., WPAFB, OHIO | 28.787 | 12.564 | 26.407 | 20.153 | 324 | 324 | 20.153 | 386 | 1 | 1 | 184 | 610 | 610 | 610 |
| ROCKET PROPULSION LAB., EDWARDS AFB, CALIF. | 157.467 | 32.882 | 81.733 | 26.231 | 800 | 800 | 26.231 | 1177 | 84 | 18 | 595 | 201 | 201 | 201 |
| ROME AIR DEVELOPMENT CENTER, GRIFFIS AFB, N.Y. | 76.216 | 35.221 | 67.226 | 143.820 | 2311 | 2311 | 143.820 | 454 | 211 | 401 | 1483 | 2967 | 2967 | 2967 |
| WEAPONS LAB., KIRTLAND AFB, N.M. | 621.689 | 170.548 | 507.170 | | 5604 | 5604 | | 5604 | 211 | 401 | 1483 | 2967 | 2967 | 2967 |
| TOTALS | 621.689 | 170.548 | 507.170 | | 5604 | 5604 | | 5604 | 211 | 401 | 1483 | 2967 | 2967 | 2967 |

TABLE 6A. AIR FORCE R+D FACILITIES DATA, FY 1971

| INSTALLATION | ACRES | SPACE (THOUSANDS OF SQUARE FEET) | | | COST (MILLIONS \$) | |
|--|-------|----------------------------------|---------|---------|--------------------|-----------|
| | | LABORATORY | ADMIN | OTHER | REAL PROPERTY | EQUIPMENT |
| AEROPROPULSION LAB., WPAFB, OHIO | 48 | 389.500 | 66.500 | 274.775 | 12.894 | 16.713 |
| AEROSPACE MEDICAL LAB. (CLINICAL), LACKLAND AFB, TEX | 1 | 7.587 | 1.467 | 2.200 | 0.148 | 0.849 |
| 6578 AEROSPACE MEDICAL RES. LAB., WPAFB, OHIO | 32 | 211.900 | 10.000 | 15.200 | 11.570 | 15.484 |
| AEROSPACE RESEARCH LABORATORIES, WPAFB, OHIO | 50 | 134.287 | 28.512 | 34.719 | 10.543 | 11.861 |
| AVIONICS LAB., WPAFB, OHIO | 265 | 224.287 | 5.304 | 271.253 | 20.872 | 34.478 |
| CAMBRIDGE RESEARCH LABS., L.G. HANSCOM FLD., MASS. | 947 | 611.201 | 19.708 | 125.916 | 22.500 | 60.268 |
| FLIGHT DYNAMICS LAB., WPAFB, OHIO | 90 | 537.300 | 56.600 | 26.000 | 22.900 | 52.750 |
| FRANK J. SEILER RESEARCH LAB., ACADEMY, COLO. | 13 | 63.830 | 24.390 | 8.430 | 1.270 | 1.466 |
| HUMAN RESOURCES LAB., BROOKS AFB, TEX. | 5 | 0.213 | 0.022 | 0.038 | 1.850 | 3.976 |
| MATERIALS LAB., WPAFB, OHIO | 54400 | 419.046 | 99.248 | 4.780 | 6.600 | 9.600 |
| ROCKET PROPULSION LAB., EDWARDS AFB, CALIF. | 2784 | 741.466 | 112.793 | 187.306 | 29.572 | 25.653 |
| ROME AIR DEVELOPMENT CENTER, GRIFFIS AFB, N.Y. | 1174 | 430.547 | 14.620 | 22.187 | 24.958 | 91.264 |
| WEAPONS LAB., KIRTLAND AFB, N.M. | | | | | 9.913 | 32.340 |
| TOTALS | 59803 | 3700.478 | 442.024 | 973.044 | 173.582 | 356.702 |

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INSTALLATION AEROMEDICAL RESEARCH LAB., FT. RUCKER, ALA.

C.O. COL ROBERT W. BAILEY TECH. DIR. DR. E.J. BALDES

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 1.029 | 0.986 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.521 | 0.470 |
| TOTAL ANNUAL LAB | 1.550 | 1.456 |
| TOTAL INHOUSE | 1.550 | 1.456 |
| TOTAL INHOUSE RDT+E | 1.029 | 0.986 |
| ANNUAL OPERATING COST | 0.540 | 0.690 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 48 | 17 | 43 | | 5 |
| CIVILIAN | 23 | 1 | 2 | | 21 |
| TOTAL | 71 | 18 | 45 | | 26 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|-------|--------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 0 | 21.495 | 5.940 | 7.470 | 34.905 | 0.203 | 1.340 |

...MISSION

MISSION IS TO CONDUCT TIMELY STUDIES ON CURRENT AND ANTICIPATED RESEARCH PROBLEMS OF A FUNDAMENTAL OR IMMEDIATE NATURE RELEVANT TO ARMY AVIATION AND AIRBORNE PHYSICAL PERFORMANCE STANDARDS AND THE MEDICAL ASPECTS OF RETENTION AND SELECTION OF AVIATORS AND PARACHUTISTS.

...CURRENT IMPORTANT PROGRAMS

RESEARCH PSYCHOLOGY APPLIED TO MEDICALLY SIGNIFICANT PROBLEMS IN ARMY AVIATION. MEDICAL RESEARCH APPLIED TO THE PROBLEMS IN ARMY AVIATION. RESEARCH OF VISUAL PROBLEMS MEDICALLY SIGNIFICANT TO ARMY AVIATION. RESEARCH OF PSYCHOACOUSTICAL PROBLEMS MEDICALLY SIGNIFICANT TO ARMY AV. RESEARCH OF BIOENGINEERING PROBLEMS MEDICALLY SIGNIFICANT TO ARMY AV.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR FUNCTIONS: TO STUDY THE PHYSIOLOGICAL AND PSYCHOLOGICAL ASPECTS OF AVIATION AND AIRBORNE PERSONNEL IN THE TRAINING AND OPERATIONAL ENVIRONMENT.

MAJOR EQUIPMENT: INCLUDES A SOUNDPROOF HEARING ROOM, ANECHOIC CHAMBER, COLORIMETER, ECG AND EEG MACHINES, A BIOCHEMISTRY LAB, AN ELECTRONICS AND ENGINEERING FABRICATION SHOP, PHOTOGRAPHY LABORATORY AND AIRBORNE MONITORING EQUIPMENT.

INSTALLATION AIRBORNE, ELECTR. AND SPECIAL WARFARE BD., FT BRAGG NC
 PRES. COL PETER E. KELLY ENGIN. ADV. EDWIN S. SPAINHOUR

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 1.323 | 1.295 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 2.867 | 2.976 |
| TOTAL ANNUAL LAB | 4.190 | 4.271 |
| TOTAL INHOUSE | 4.190 | 4.271 |
| TOTAL INHOUSE RDT+E | 1.323 | 1.295 |
| ANNUAL OPERATING COST | 0.093 | 0.093 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 205 | 0 | 52 | | 153 |
| CIVILIAN | 55 | 0 | 8 | | 47 |
| TOTAL | 260 | 0 | 60 | | 200 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|--------|--------|---------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 0 | 0.000 | 50.879 | 76.398 | 127.277 | 0.000 | 2.925 |

...MISSION
 PLAN, CONDUCT, AND REPORT ON EXPANDED SERVICE TESTS AND CHECK TESTS OF AIRBORNE, COMMUNICATIONS AND ELECTRONICS EQUIPMENT AND SYSTEMS. THE COMMUNICATIONS AND ELECTRONICS-TYPE TESTS ARE USED AT DIV LEVEL OR BELOW. THE AIRBORNE TSTS PERTAIN TO EQUIP + SYS WHICH SUPP AIRDROP + TRANSPORT.

...CURRENT IMPORTANT PROGRAMS
 TEST OF C5A AIRPLANE
 CHECK TEST OF OVID MOHAWK SURVEILLANCE SYSTEMS
 TACFIRE OF ADSAF

...FUNCTIONS/EQUIPMENT/CAPABILITIES
 FACILITIES INCLUDE BOARD HANGAR BUILDING, COMMUNICATIONS-ELECTRONICS TEST FACILITY, CRYPTOGRAPHIC TEST FACILITY, AND WOODWORK SHCP.
 MAJOR EQUIPMENT INCLUDES TWO T-28A AND 2 T-28B AIRCRAFT USED IN AERIAL PHOTOGRAPHY MOTION PICTURE, BLACK AND WHITE AND COLOR, 40,000-POUND LOADER, 5-TON WRECKER, 20-TON MOBILE CRANE, 3 SEMITRAILERS, SEVERAL STANDARD VEHICLES, ONE U-6 AIRCRAFT, ONE UH-1 AIRCRAFT, VARIOUS TYPES OF STANDARD PARACHUTES, STANDARD PLATFORMS, ELEVEN GASOLINE DRIVEN GENERATORS, BALLASTABLE AIRDROP VEHICLES WITH REMOVABLE WEIGHT INCREMENTS, THREE ANEMOMETERS, VARIOUS THERMOMETERS, STOPWATCHES, ELEVEN TACTICAL RADIO SETS, TWO RADIO RECEIVERS, SIX TELETYPEWRITER SETS, TWENTY-TWO SIGNAL GENERATORS, TWO SOUND LEVEL METERS AND ONE SOUND AND VIBRATION ANALYZER.

INSTALLATION AIR DEFENSE BOARD, FT. BLISS, TEX.

PRES. COL WILLIAM H. HULCOMBE, JR.

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 3.693 | 3.097 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 2.591 | 2.677 |
| TOTAL ANNUAL LAB | 6.284 | 5.774 |
| TOTAL INHOUSE | 6.183 | 5.732 |
| TOTAL INHOUSE RDT+E | 3.592 | 3.055 |
| ANNUAL OPERATING COST | 0.528 | 0.525 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 354 | 2 | 54 | | 300 |
| CIVILIAN | 114 | 0 | 11 | | 103 |
| TOTAL | 468 | 2 | 65 | | 403 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------------------|--------|--------|---------|-------------------|--------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 26 | 36.550 | 38.646 | 77.417 | 152.613 | 2.196 | 11.055 |

...MISSION

PLAN, CONDUCT, REPORT ON, CHECK, TEST OF AIR DEF EQUIP+SYS.
PARTICIPATE IN ENG TEST, INIT PROD TEST, PRE-PROD TEST+ OTHER TESTS.
PROVIDE ADVICE TO PROPONENT AGENCIES DURING DEVELOPMENT OF EQUIPMENT.

...CURRENT IMPORTANT PROGRAMS

PRODUCT IMPROVEMENT TEST NIKE-HERCULES SAMCAP MODIFICATION
SERVICE TEST OF IMPROVED HAWK TROPIC
SERVICE TEST OF AN/TSQ-73
SERVICE TEST OF FORWARD AREA ACQUISITION RADAR
VULCAN AIR DEFENSE EFFECTIVENESS STUDY

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ASSURE MAX UTILIZATION OF RESOURCES IN ACCOMPLISHMENT OF MISSION. PLAN,
CONDUCT, RECORD+REPORT RESULTS OF TEST AND EVALUATION OF WPN SYS+FIRE
DIST SYS. EVALUATE ITEMS FOR SAFETY, SUITABILITY FOR ARMY USE OR SUIT-
ABILITY FOR ISSUANCE TO FLD. COMMENTS ON CMDQ/QMR/SDR+MAINT PKG. ASSIST
IN REVISIONS OF MIL SPECS. SUPPORT FLD RSCH STUDIES, TESTS+OPERATIONS.
PROVIDE REPRESENTATION+SELECTION OF TRAINING AID. EQUIPMENT, COMPUTER,
TAC+INSTRUMENTATION RADAR, CINE THEODOLITE, PHOTO LAB AND FILM READING
EQUIPMENT. SITE MONITOR FOR ELECTRONIC TEST OF EQUIP+ RANGE FOR FIRING
FORWARD AREA WPNS TGT DEVICES + TARGET DRONES.

INSTALLATION AIR MOBILITY RSCH AND DEVEL LAB. MOFFETT FIELD, CALIF

DIR. PAUL F. YAGGY DEPUTY DIR. COL LESTER C. FARWELL

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 37.026 | 51.623 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.001 | 0.001 |
| TOTAL OTHER | 0.062 | 0.075 |
| TOTAL ANNUAL LAB | 37.089 | 51.703 |
| TOTAL INHOUSE | 24.113 | 22.050 |
| TOTAL INHOUSE RDT+E | 24.050 | 21.970 |
| ANNUAL OPERATING COST | 2.479 | 3.390 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 55 | 1 | 33 | | 22 |
| CIVILIAN | 551 | 19 | 230 | | 321 |
| TOTAL | 606 | 20 | 263 | | 343 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|--------|--------|---------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 108 | 85.014 | 43.308 | 15.584 | 143.906 | 1.474 | 5.446 |

...MISSION

MANAGES AND EXECUTES R+D OF ARMY AIR MOBILE SYSTEMS THROUGH DEMONSTRATION OF TECHNOLOGY. PROVIDES TECH SUPPORT TO PROJECT/PRODUCT MANAGERS + SYSTEM DEVELOPERS AS REQ. PROVIDES INDEPENDENT TECHNICAL RISK ASSESSMENT TO CG USAAVSCOM + HIGHER AUTHORITY.

...CURRENT IMPORTANT PROGRAMS

RESEARCH IN FUNDAMENTAL ROTOR AERODYNAMICS, DYNAMICS + NOISE. R+D OF SMALL GAS TURBINES. R+D TO IMPROVE RELIABILITY AND MAINTAINABILITY OF AIR MOBILE SYSTEMS. RESEARCH COMPOSITES AND MEASURE OPERATIONAL FLIGHT LOADS TO IMPROVE STRUCTURES FOR AIRCRAFT. EVOLVE TECHNOLOGY AND CRITERIA TO IMPROVE FLIGHT SAFETY AND SURVIVABILITY.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THREE DIRECTORATES- MOFFETT FIELD, CA., CLEVELAND, OH., HAMPTON, VA. CO-LOCATED WITH NASA PARTICIPATING IN RSCH OF AIR MOBILE SYSTEMS AND DISCIPLINES, JOINTLY USING WIND TUNNELS, SIMULATORS + LAB TEST FAC INCL SHOPS, FLIGHT LINE + HANGAR, STRUCTURE LAB, ENGINE TEST FAC + COMPUTATIONAL EQUIPMENT. FOURTH DIRECTORATE AT FT. EUSTIS, VA., PERFORMING ADVANCED APPLICATIONS WORK, MAJOR EQUIPMENT AND FACILITIES- FILAMENT WINDING MACHINES, TENSILE TESTERS, VIBRATION TESTER, SMALL BALLISTIC RANGE, CALIBRATION LAB, IBM 360-44, ENVIRONMENT CHAMBER, ATOMIC ABSORPTION SPECTROMETER, TELEMETER GROUND STATION, NON-DESTRUCTIVE TESTING FACILITY, FLIGHT SAFETY LAB.

INSTALLATION ARCTIC TEST CENTER, FT. GREELY, ALASKA

C.O. COL DAVID J. SCHUMACHER TECH. ADV. JERRELL L. SANDERS

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 2.221 | 2.580 |
| TOTAL PROCUREMENT | 0.006 | 0.035 |
| TOTAL O+M | 0.005 | 0.009 |
| TOTAL OTHER | 2.530 | 2.232 |
| TOTAL ANNUAL LAB | 4.762 | 4.856 |
| TOTAL INHOUSE | 4.752 | 4.821 |
| TOTAL INHOUSE RDT+E | 2.211 | 2.550 |
| ANNUAL OPERATING COST | 1.837 | 2.009 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 333 | 0 | 54 | 279 |
| CIVILIAN | 27 | 0 | 3 | 24 |
| TOTAL | 360 | 0 | 57 | 303 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|--------|--------------------|--------|---------|---------|-------------------|-------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 726207 | 11.126 | 34.584 | 214.237 | 259.947 | 34.962 | 7.349 |

...MISSION

PLAN + CONDUCT + REPORT ON ENVIRONMENTAL PHASES OF ENGINEERING SERVICE
CHECK CONFIRMATORY + OTHER TESTS + EVALUATIONS FOR TECOM PROJECT MGRS +
OTHER COMMODITY COMMANDS PARTICIPATE IN + MONITOR TRCCP TESTS PROVIDE
ADVICE TO PROPONENT AGENCIES DURING DEVELOPMENT OF MATERIEL

...CURRENT IMPORTANT PROGRAMS

INITIAL PROU TEST OF M792 AMBULANCE
SVC TEST OF 105MM CARTRIDGE, XM548
ENGR TEST OF M608 + M616 MINE FUZES
ENGR TEST OF NYLON TUBING
MILITARY POTENTIAL TEST OF VEHICLE HEATERS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOREQUIPMENT + FACILITIES- 3 MULTIPURPOSE TEST SITES, A NETWORK OF
VEHICLE MAINTENANCE SHOPS ROTARY + FIXED WING SUPPORT, A SUPPLY COMPLEX
PHOTO GRAPHIC ARTS + INSTRUMENTATION SHOPS + CALIBRATION FACILITIES
FACILITIES CAPABILITIES-SUPPORT + TECHNOLOGICAL ASSISTANCE FOR TESTING
OF ARMOR INFANTRY ARTILLERY COMMO AIRCRAFT GENL EQUIP NUCLEAR BIOLOGICAL
+ CHEMICAL ITEMS

INSTALLATION ARMOR AND ENGINEER BOARD, FT. KNOX, KY

PRES. COL A.H. HISLOP TECH. ADV. A.E. ELKINS

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 1.854 | 2.063 |
| TOTAL PROCUREMENT | 0.130 | 0.220 |
| TOTAL O+M | 0.000 | 0.220 |
| TOTAL OTHER | 2.700 | 2.920 |
| TOTAL ANNUAL LAB | 4.684 | 5.163 |
| TOTAL INHOUSE | 4.537 | 5.163 |
| TOTAL INHOUSE RDT+E | 1.707 | 2.063 |
| ANNUAL OPERATING COST | 0.379 | 0.420 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 431 | 0 | 66 | 365 |
| CIVILIAN | 98 | 0 | 8 | 90 |
| TOTAL | 529 | 0 | 74 | 455 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|--------------------|--------|---------|---------|-------------------|-------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 6570 | 6.200 | 68.068 | 258.345 | 332.613 | 8.300 | 2.350 |

...MISSION

PLAN, CONDUCT AND REPORT ON ST AND CK TL TS OF ARMOR AND ENGR EQUIP, AUTO SYS AND MATERIAL, AND ATOMIC DEMO MUNITIONS. PARTICIPATE IN ET, IP, AND PP TESTS AS DIRECTED. PROVIDE ADVICE TO AGENCIES AND DEVELOPERS IN DEVELOPMENT OF ARMOR AND ENGINEERING EQUIPMENT.

...CURRENT IMPORTANT PROGRAMS

IMPLEMENTATION OF TEAM-UP, PART D.
IMPROVEMENT OF ALL ASPECTS OF MILITARY SERVICE UNDER VOLAR CONCEPT.
ST-IMPROVED RIBBON BRIDGE BEING CONDUCTED CN SEQUALITCHEW RIVER, WASH.
ST-HVY EQUIP TRANSPORTER HET-70 22 1/2 TON W/SEMITRAILER, 60TON, XM747
IP-LANDING CRAFT LCM-8 BEING CONDUCTED-US NAVY BASE, CORONADO, CALIF

...FUNCTIONS/EQUIPMENT/CAPABILITIES

USAARENBD MAJOR EQUIP: ADEQUATE STILL AND MOTION PICTURE PHOTO EQUIP
VIDEO TAPE RECORDER STATIONARY ELEVATED CAMERA PLATFORM FOR HEIGHTS UP
TO 40 FT ABOVE ADJACENT GRADE GENERATOR LOAD BANKS MOBILE DYNAMOMETER,
WHICH MEASURES DRAW BAR PULL FROM 0 TO 100 TONS OVERHEAD CRANE, 40 TON
TACTICAL WHLD VEH COMBAT VEH ENGR CNSTR EQUIP MACHINE SHOP EQUIP
AND SHOP MAINTENANCE SETS.
THE BOARD FACILITIES CONSIST OF 6400 ACRES FOR TESTING MCFARLAND-OLIVER
RANGE 160 ACRES WITH A FIRING CAPABILITY OF UP TO 2000 METERS ADD L
RANGE WITH FIRING UP TO 10,000 METERS ON A SPACE AVAIL BASIS STILL
WATER TEST AREA BARRACKS SPACE 72988 SQ FT OFFICE SPACE 71788 SQ FT
SHOP AREA 69888 SQ FT STORAGE 48106 SQ FT AND MOTOR PARK 85750 SQ FT.

INSTALLATION ARMY MATERIAL SYST AND ANAL AGENCY, ABERDEEN P.G., MD.

C.O. COL RUDOLPH A. AXELSON DIR. DR. JOSEPH SPERRAZZA

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 12.041 | 12.328 |
| TOTAL PROCUREMENT | 0.191 | 0.000 |
| TOTAL O+M | 1.604 | 1.662 |
| TOTAL OTHER | 0.020 | 0.000 |
| TOTAL ANNUAL LAB | 13.856 | 13.990 |
| TOTAL INHOUSE | 8.261 | 8.729 |
| TOTAL INHOUSE RDT+E | 7.179 | 7.828 |
| ANNUAL OPERATING COST | 1.578 | 1.782 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|----|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 13 | 0 | 13 | 0 | |
| CIVILIAN | 314 | 3 | 238 | 76 | |
| TOTAL | 327 | 3 | 251 | 76 | |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|--------|--------|--------|-------------------|-------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 4 | 41.964 | 10.491 | 34.970 | 87.425 | 1.923 | 4.815 |

...MISSION

PROVIDE CENTRAL TECHNICAL CAPABILITY FOR AMC SYSTEMS ANALYSIS RELIABILITY + IMPROVEMENT IN CAPABILITY + PERFORMANCE ANALYZE EFFECTIVENESS AND DETERMINE LOG REQUIREMENTS FOR NEW/EXISTING ARMY MATERIAL SYSTEM TO PROVIDE ALTERNATIVES TO AMC DECISION MAKERS PLAN + MANAGE JTCG/ME EFFORT

...CURRENT IMPORTANT PROGRAMS

MANAGEMENT AND SUPPORT-- AMSAA
ANTI-ARMOR SYSTEMS + ARMOR VULNERABILITY
WEAPONS EFFECTS/TARGET VULNERABILITY
AIRCRAFT WEAPON SYSTEM EFFECTIVENESS
JOINT TECHNICAL COORDINATING GROUP/MUNITIONS EFFECTIVENESS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCT AMC WPN SYS ANALYSIS AND EVAL OF MATERIAL CONCEPTS AND PROPOSALS DEVELOPS, IMPROVES, AND DISSEMINATES METHODOLOGY AND TECHNIQUES FOR- CONDUCT OF SYS ANALYSIS, ANAL OF PERFORMANCE, SCHEDULE AND COST RISKS, DESIGN, CONDUCT AND EVAL OF TESTS. EVAL LIFE CYCLE REQ OF MATERIAL SYS. CONDUCTS TACTICAL, OPERATIONAL ANALYSIS OF WPN + MATERIAL SYSTEMS. RELIABILITY, AVAILABILITY AND MAINTAINABILITY CENTER FOR ARMY SYS. TECH DIR OF AMC SURVEILLANCE PROGRAM FOR STOCKS OF ARMY MISSILES, NUCLEAR, AND NONNUCLEAR AMMUNITION. PROVIDE TECH COORD, DATA, AND ANALYSIS FOR DETERMINATION OF JOINT SERVICES MUNITIONS EFFECTIVENESS MODELS AND MANUALS.

INSTALLATION ARTILLERY BOARD, FT. SILL, OKLA.

PRES. COL ROBERT T. BLAKE

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.958 | 0.857 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 2.710 | 3.077 |
| TOTAL ANNUAL LAB | 3.668 | 3.934 |
| TOTAL INHOUSE | 3.538 | 3.874 |
| TOTAL INHOUSE RDT+E | 0.828 | 0.797 |
| ANNUAL OPERATING COST | 0.248 | 0.208 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 389 | 0 | 138 | 251 |
| CIVILIAN | 39 | 0 | 2 | 37 |
| TOTAL | 428 | 0 | 140 | 288 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|--------|--------|---------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 230 | 4.008 | 61.245 | 39.758 | 105.011 | 0.000 | 1.340 |

...MISSION

PLAN CONDUCT AND REPORT ON EXPANDED SERVICE TEST DEVELOPMENTAL
SUITABILITY TESTS CHECK TESTS PRODUCT IMPROVEMENT TESTS AND MILITARY
POTENTIAL TESTS AS PRESCRIBED IN AR 70-10
PROVIDE ADVICE TO PROPONENT AGENCIES AND DEVELOPERS

...CURRENT IMPORTANT PROGRAMS

SERVICE TEST LANCE SYSTEM XM234 XM252 XM198
SERVICE TEST TACFIRE
SERVICE TEST GYRO AZIMUTH LT WEIGHT
SERVICE TEST FUZE MTSQ XM577 XM582E1
SERVICE TEST HOWITZER 8 INCH SELF PROPELLED FULL TRACK M110E2

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCT MIL. POTENTIAL, EXPANDED SERVICE, INITIAL PROGN. AND PROD.
IMPROVEMENT TESTS OF FA MATERIAL
FIELD ARTILLERY TEST ITEMS
MAINTAIN TEST ITEMS DURING TEST PERIOD
SPECIAL EFFECTS FIELD UTILIZED FOR IMPROVED CONVENTIONAL MUNITIONS

INSTALLATION ATMOSPHERIC SCIENCE LAB. WHITE SANDS, NEW MEXICO
C.O. AND DIR. COL RICHARD C. CHABOT DEPUTY DIR. DR. MARVIN DIAMOND

| PROGRAM DATA BY FISCAL YEAR (MILLION \$) | | |
|--|------------------|---------------------|
| PROGRAM | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 10.023 | 8.936 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.107 | 0.013 |
| TOTAL OTHER | 2.669 | 3.004 |
| TOTAL ANNUAL LAB | 12.799 | 11.956 |
| TOTAL INHOUSE | 10.716 | 9.921 |
| TOTAL INHOUSE RDT+E | 7.940 | 6.904 |
| ANNUAL OPERATING COST | 0.000 | 0.000 |

| PERSONNEL DATA (END OF FY 1971) | | | | |
|---------------------------------|------------------------|----------------|---------------|--------------|
| PERSONNEL | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 516 | 0 | 12 | 504 |
| CIVILIAN | 253 | 10 | 114 | 139 |
| TOTAL | 769 | 10 | 126 | 643 |

| SPACE AND PROPERTY | | | | | COST (MILLION \$) | |
|--------------------|----------------------------------|-------|-------|-------|-------------------|--------|
| ACRES | SPACE (THOUSANDS OF SQUARE FEET) | | | TOTAL | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | | | |
| 45 | 0.050 | 0.025 | 0.023 | 0.098 | 48.000 | 25.000 |

...MISSION

RESEARCH IN ATMOSPHERIC SCIENCES, DEVELOPMENT OF METEOROLOGICAL TECHNIQUES AND EQUIPMENT FOR FIELD ARMY. FURNISH METEOROLOGICAL SERVICES TO ARMY RDT+E ACTIVITIES. PROVIDE ADMIN AND LOGISTICAL SUPPORT TO OTHER ECOM ELEMENTS AT WHITE SANDS MISSILE RANGE, NEW MEXICO.

...CURRENT IMPORTANT PROGRAMS

DETERMINATION OF ATMOSPHERIC EFFECTS ON ARMY SYSTEMS
DEVELOP ARMY ATMOSPHERIC SENSING SYSTEMS, TECHNIQUES, APPLICATIONS
RESEARCH OF MICROSCALE, MESOSCALE, AND UPPER ATMOSPHERIC PHENOMENA
ATMOSPHERIC MODIFICATION
METEOROLOGICAL SUPPORT TO RDT+E ACTIVITIES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

METEOROLOGICAL RESEARCH FACILITY AND CAPABILITY
WIND TUNNEL FACILITY, LOW SPEED
ATMOSPHERIC PHYSICS RESEARCH FACILITY AND CAPABILITY
UPPER ATMOSPHERIC RESEARCH AND SOUNDING ROCKET FACILITY AND CAPABILITY
ION MASS SPECTROMETER SYSTEM
METEOROLOGICAL SOUNDING ROCKET FACILITIES-N.M., UTAH, ALASKA, CANAL ZONE
REMOTE ATMOSPHERIC SENSING FIELD RESEARCH FACILITY
ATMOSPHERIC SPECTROSCOPY-LASER PROPAGATION FACILITY
METEOROLOGICAL RDT+E SUPPORT FACILITIES- ALASKA TO PANAMA CANAL ZONE
METEOROLOGICAL INSTRUMENTATION TEST, MAINTENANCE, CALIBRATION FACILITY
FACILITY FOR SONIC OBSERVATION OF TRAJECTORY AND IMPACT OF MISSILES
COLOR DENSITOMETER FOR ANALYSIS OF METEOROLOGICAL SATELLITE DATA

INSTALLATION AVIATION TEST ACTIVITY, EDWARDS AFB, CAL.

C.O. LTC GERALD E. SWECKER TECH. DIR. JAMES S. HAYDEN

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 2.740 | 2.979 |
| TOTAL PROCUREMENT | 0.225 | 0.312 |
| TOTAL O+M | 0.188 | 0.022 |
| TOTAL OTHER | 0.664 | 0.725 |
| TOTAL ANNUAL LAB | 3.817 | 4.013 |
| TOTAL INHOUSE | 3.768 | 4.010 |
| TOTAL INHOUSE RDT+E | 2.691 | 2.979 |
| ANNUAL OPERATING COST | 0.700 | 0.700 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 75 | 0 | 56 | 19 |
| CIVILIAN | 141 | 1 | 33 | 108 |
| TOTAL | 216 | 1 | 89 | 127 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|--------|--------|---------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 9 | 4.280 | 32.830 | 98.490 | 135.600 | 1.140 | 3.627 |

...MISSION

ENGR FLIGHT EVAL OF AIR VEHICLES
CONSIDERED FOR ARMY APPLICATION OR INCORP ADV CONCEPTS WITH POTENTIAL
MILI APPLI PRODUCE TEST DATA ON BASIC AIR VEH PERF HANDLING QUAL SYS/SUB
SYS INTERFACE, AND INTEGRATED SYS MAINTAINABILITY AND RELIABILITY

...CURRENT IMPORTANT PROGRAMS

CH-54 AIRWORTHINESS AND FLT CHAR
OH-58 250-C20 ENG
AH-56 ADV PRODN ENG
UH-1H TAIL ROTOR PERF
FOREST SER SPT

...FUNCTIONS/EQUIPMENT/CAPABILITIES

1 T28 1 C47 1 U8G 3 F51D 1 OVIC 1 CH47B 1UH1C 1UHM 2LH1H 6TEST ACFT

AIRBORNE ACQUISITION SYSTEMS

2REMOTE GROUND STATIONS WITH COMPUTER AND TELEMETRY CAPABILITY
MAGNETIC TAPE SELECTRIC TYPEWRITERS FOR TEST REPORT PREPARATION
LIMITED INSTRUMENT CALIBRATION CAPABILITY

INSTALLATION AVIATION TEST BOARD, FT. RUCKER, ALA.

PRES. COL D.E. GUST

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 5.256 | 6.139 |
| TOTAL PROCUREMENT | 0.054 | 0.799 |
| TOTAL O+M | 0.233 | 0.127 |
| TOTAL OTHER | 2.098 | 2.020 |
| TOTAL ANNUAL LAB | 7.641 | 9.065 |
| TOTAL INHOUSE | 5.341 | 7.010 |
| TOTAL INHOUSE RDT+E | 2.956 | 4.084 |
| ANNUAL OPERATING COST | 2.231 | 2.665 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 250 | 0 | 43 | 207 |
| CIVILIAN | 139 | 0 | 5 | 134 |
| TOTAL | 389 | 0 | 48 | 341 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------------------|--------|---------|---------|-------------------|-----------|
| | SPACE (THOUSANDS OF SQUARE FEET) | LAB | ADMIN | OTHER | TOTAL | REAL PROP |
| 2149 | 3.018 | 19.190 | 155.272 | 177.480 | 2.654 | 14.411 |

...MISSION

PLAN, CONDUCT AND REPORT ON AIRCRAFT SERVICE AND CHECK TESTS AND AUXILIARY EQUIPMENT. PARTICIPATE IN ENGINEERING TESTS ETS, INITIAL PRODUCTION TESTS IPIS AND APPROPRIATE PREPRODUCTION TESTS PPTS AS DIRECTED. ADVISE PROPONENT AGENCIES DURING THE DEVELOPMENT OF AIRCRAFT SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

CHEYENNE
CH-47C
OH-58
HELMS
PRODUCT IMPROVEMENT ON UH-1

...FUNCTIONS/EQUIPMENT/CAPABILITIES

USAAVNTBD HAS THE FACILITIES AND CAPABILITIES TO PLAN, CONDUCT, RECORD AND REPORT THE RESULTS OF TESTS AND EVALUATIONS. REVIEW AND COMMENT ON QMDS, QMRS, SDRS, MAINTENANCE PACKAGES AND ASSIST IN THE REVIEW OF MILITARY SPECIFICATIONS. EVALUATE AND RECOMMEND ON THE SAFETY AND SUITABILITY OF MATERIALS FOR ARMY USE. SUPPORT FIELD RESEARCH, STUDIES, TESTS AND OPERATIONS OF OTHER USAMC SUBORDINATE ELEMENTS, CA OR DOD AGENCIES. PLAN, DIRECT AND CONTROL PROGRAMS IN METHODOLOGY TO ASSURE PROPER TESTING AND REPORTING IN CURRENT AND FUTURE YEARS. ASSIST IN PREPARATION OF TRAINING LITERATURE AND SELECTION OF TRAINING AIDS. RECOMMEND TO CG, USATECOM, THROUGH ESTABLISHED PROCEDURES RESEARCH AND DEVELOPMENT PROJECTS DESIGNATED TO IMPROVE USATECOM TEST AND EVALUATION.

INSTALLATION AVIONICS LABORATORY, FORT MONMOUTH, N.J.

C.O. LTC EVERETT RICHARDS TECH. DIR. THEODORE SUETA

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 11.240 | 8.176 |
| TOTAL PROCUREMENT | 3.045 | 2.548 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.000 | 0.000 |
| TOTAL ANNUAL LAB | 14.285 | 10.724 |
| | | |
| TOTAL INHOUSE | 11.013 | 9.842 |
| TOTAL INHOUSE RDT+E | 8.118 | 7.474 |
| ANNUAL OPERATING COST | 3.713 | 4.233 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 30 | 1 | 29 | 1 |
| CIVILIAN | 209 | 4 | 144 | 65 |
| TOTAL | 239 | 5 | 173 | 66 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------------------|-------|-------|--------|-------------------|--------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 25 | 67.149 | 4.378 | 1.706 | 73.233 | 2.604 | 11.980 |

...MISSION

APPLIED RES DEVEL AND ENGRG IN ARMY AVIATION ELECTRONICS INCLUDING
NAVIGATION LANDING COMMUNICATIONS ENVIRONMENT SENSING CONTROL THEORY
AIRCRAFT ANTENNAS INSTRUMENTATION GROUND AND AIRBORNE SYSTEMS
INSTALLATION AND TEST SYSTEMS ENGRG

...CURRENT IMPORTANT PROGRAMS

LOW LEVEL NIGHT OPERATIONS FOR ARMY AIRCRAFT
LORAN CD NAVIGATION SYSTEM
ATTENDED AREA TACTICAL LANDING SYSTEM
HELICOPTER MULTIFUNCTION SYSTEM
AIRCRAFT SYSTEMS ENGINEERING

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TACTICAL AVIONICS SYSTEMS SIMULATOR
AIRCRAFT ANTENNA TEST FACILITY
FIXED BASE COCKPIT SIMULATOR UH-1
INSTRUMENTED C-47 AIRCRAFT FOR TESTING NAVIGATION SYSTEMS
GYRO TEST FACILITY
MOVING EARTH SIMULATOR FOR DOPPLER NAVIGATOR TESTING
ELECTROMAGNETIC RADIATION TEST FACILITY

INSTALLATION BALLISTIC RES. LABS., ABERDEEN PROVING GROUND, MD.
C.O. COL RUDOLPH A. AXELSON TECH. DIR. CR. ROBERT J. EICHELBERGER

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 24.379 | 23.792 |
| TOTAL PROCUREMENT | 0.279 | 0.152 |
| TOTAL O+M | 0.327 | 0.245 |
| TOTAL OTHER | 0.000 | 0.100 |
| TOTAL ANNUAL LAB | 24.985 | 24.285 |
| TOTAL INHOUSE | 19.309 | 18.813 |
| TOTAL INHOUSE RDT+E | 18.718 | 18.318 |
| ANNUAL OPERATING COST | 5.593 | 5.542 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 76 | 12 | 73 | | 3 |
| CIVILIAN | 724 | 73 | 423 | | 321 |
| TOTAL | 800 | 85 | 476 | | 324 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|--------|---------|---------|-------------------|--------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 3469 | 298.232 | 74.558 | 248.526 | 621.316 | 12.786 | 19.582 |

...MISSION

CONDUCT RES + EXPL DEVL IN SCIENCES/TECHNOLOGIES NECESSARY FOR
CONCEIVING DESIGNING DEVELOPING AND EVALUATING WEAPONS SYSTEMS.
PURSUE ORIENTED FUND RESEARCH IN PHYSICS CHEM MATH ENGR + BIOPHYSICS
INVESTIGATE PERTINENT BRANCHES OF MILITARY SCIENCE + TECHNOLOGIES

...CURRENT IMPORTANT PROGRAMS

MATHEMATICAL MODELS OF GUN PROPELLANT SYSTEMS
PENETRATION MECHANICS
WARHEAD DYNAMICS FRAGMENTATION-EXPLOSIVE METAL INTERACTION
REFINED FLIGHT DYNAMICS OF PROJECTILES AND MISSILES
VULNERABILITY GROUND + AIRBORNE TARGETS-OFFENSIVE/DEFENSIVE MEASURES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

SUPERSONIC + HYPERSONIC WIND TUNNELS/TRANSONIC RANGE
EXPLOSIVE BLAST CHAMBERS AND HIGH ALTITUDE BLAST SPHERE
SHOCK TUBES-SIMULATION OF NUCL BLAST/CHEMICAL REACTION RATE
PULSE RADIATION FACILITY-TANDEN VAN DE GRAAFF ACCELERATOR
EXPLOSIVE FIELD TEST FACILITIES
HIGH SPEED MOTION PHOTOGRAPHY SCHLIEREN INTERFEROMETRY
ELECTRON MICROSCOPE-ELECTRON SPIN RESONANCE-NUCL MAGNETIC RESEARCH
ELECTROMAGNETIC RADIATION RANGES
ANALOG COMPUTER FOR SIMULATION OF DYNAMICS OF GUN AND RIFLE
PROPULSION AND COMBUSTION CHAMBERS
LASERS FOR PLASMA PROPAGATION AND SIGNATURES
AFTER GLOW REACTION CHAMBER-UPPER ATMOSPHERE CHEM REACTION RATE

INSTALLATION BEHAVIORAL SCIENCE RES. LAB., WASH., D.C.

DIR. DR. J.E. UHLANER

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 2.721 | 3.715 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.000 | 0.000 |
| TOTAL ANNUAL LAB | 2.721 | 3.715 |
| TOTAL INHOUSE | 1.951 | 1.965 |
| TOTAL INHOUSE RDT+E | 1.951 | 1.965 |
| ANNUAL OPERATING COST | 0.000 | 0.000 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 4 | 0 | 1 | 3 |
| CIVILIAN | 83 | 24 | 57 | 26 |
| TOTAL | 87 | 24 | 58 | 29 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|-------|--------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 0 | 26.816 | 4.367 | 1.893 | 33.076 | 0.000 | 1.905 |

...MISSION

RSCH IN BEHAVIORAL SCI AND OPS RSCH SUPPORTING BROAD AREAS OF PERS MGMT HUM PERF EXPERIMENTATION AND MANNED SYS RSCH. RSCH CONDUCTED IN AND FOR DEPT ARMY TO MEET OBJ OF ARMY-WIDE SIGNIFICANCE AND RSCH DIRECTED TOWARD OPTIMAL EMPLOYMENT OF ARMY PERS IN VARIETY OF MILITARY SETTINGS

...CURRENT IMPORTANT PROGRAMS

HUMAN FACTORS RSCH ON CAREER DEVELOP OF O LDRS
RSCH ON SCREENING AND DIFFERENTIAL CLASSIFICATION OF EM
EVAL ALTERNATIVE MANP POLS IN PERS OPNS THROUGH MODELS
RSCH ON BEH FUNCTIONS OF CRITICAL HUM PERF IN NT OPNS
RSCH ON MAN MACHINE FUNCTIONS IN INTELL PROCESSING

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PROGRAM COMPRISES 4 RSCH AREAS: 1 PERS MGMT RSCH-SELECTION. THIS EFFORT CONCERNED WITH PRED INDIV HUM PERF EFFECTIVENESS. 2 PERS MGMT RSCH--MNPWR MGMT, CONCERNED WITH EVAL AND SEL PERS MGMT POLS THRU OPNS RSCH MODLING. 3 HUM PERF EXPERIMENTATION. CONCERNED WITH IMPROVING FUNCTIONAL PORTIONS OF PERF--CRIT BEH IN JOBS. MOBILE, FULLY AUTCMATED, ON-LINE MAGNETIC TAPE SYSTEM RECORDS AUTOMATICALLY IN REAL TIME TARGET ACQUIS RESPONSES AND SEARCH BEH OF SOLDIERS INVOLVED IN NT OPNS EXPERIMENTATN AND PROVIDES RAPID FEEDBACK FOR MIL USERS. 4 MANNED SYSTEMS RSCH IMPRVS TOTAL SYSTEMS PERFORMANCE AS RELATES TO HUMAN PERFORMANCE--GROUPS OF JOBS. AUTOMATED INFO SYST LAB PROVIDES HIGHLY FLEX AND FUNCTIONAL ACTIVITY FOR RSCH IN SURVEILLANCE, COMMAND AND INTELL SYSTEMS. VARIOUS CONFIGS OF SYST COMPONENTS MAKE POSSIBLE INTERACTIONS AND TRADE OFFS

INSTALLATION BIOLOGICAL LABS., FT. DETRICK, MD.

C.O. COL FLOYD B. MITMAN ACTG. SCIENTIFIC DIR. DR. HAROLD N. GLASSMAN

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 18.547 | 18.677 |
| TOTAL PROCUREMENT | 0.073 | 0.007 |
| TOTAL O+M | 1.152 | 1.166 |
| TOTAL OTHER | 1.063 | 0.896 |
| TOTAL ANNUAL LAB | 20.835 | 12.746 |
| TOTAL INHOUSE | 20.713 | 12.746 |
| TOTAL INHOUSE RDT+E | 18.425 | 18.677 |
| ANNUAL OPERATING COST | 6.646 | 6.352 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 77 | 5 | 33 | 44 |
| CIVILIAN | 210 | 23 | 92 | 118 |
| TOTAL | 287 | 28 | 125 | 162 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|---------|---------|----------|-------------------|--------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 1220 | 1023.267 | 101.878 | 913.832 | 2038.977 | 72.562 | 18.423 |

...MISSION

CONDUCT A PROGRAM OF BASIC RSCH IN LIFE SCIENCES
ANALYZE THREAT OF ENEMY USE OF BW TO INCLUDE EVAL OF INTELL RELATED TO
BW DEV AND EVAL MATERIEL FOR NON-MED ASPECTS OF DEFENSE AGAINST BW
EVAL BW POTENTIAL OF SEL BIO AGENTS IN TERMS OF THREATS TO US

...CURRENT IMPORTANT PROGRAMS

BASIC RSCH IN MICRO GENETICS TISSUE CUL PATHOGENICITY AERO INFEC AND
IMMUNOLOGY STUDIES ON EPIDEM AND ECOLOG CONSEQ OF BW ATTACKS STUDIES ON
BIOL BIOCHEM AND AERO BIOL PROPERTIS OF POTENTIAL BW AGENTS
THREAT ANALYSIS TO DETERMINE VULNERABILITY OF US TO BIO ATTACK
DEVELOPMENT OF BIO DETECTION AND WARNING DEVICES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

EQUIP FOR MICRO-BIO, AERO-BIO MED AND PROC RSCH ON HIGHLY INFEC AND PATH
MICRO BLDGS DIV INTO POTEN CONTAM AND NON-CONTAM BIO CAB AIR LOCKS CHG
RNS SHOW STERIL PASS BOX MSP LAB EQUIP LG AND SM FERMT AERC CHMBR SUN
LIGHT LAB COLDRMS VENT AIR IN PATH LABS FLOWS FRM CLN TO PCT CONTAM
AREAS NOT RECIR PAIR AND GAS FRM BIO SAF CAB TEST CHMR EXPOS AN RMS
HEAT STERIL PRIOR TO DISCH EQUIP TO STERIL CONTAM LIQ WASTE AND INCIN
CONTAM SOLID WASTE. CHEM TYPE LABS. MOD AN HOLD FAC AND LG AN FAC
FOR PROD OF NON PATH MAT. EXT SHOPS AND CONTAM LAUNDRY. ADP FAC.
LG TECH LIBRARY.

INSTALLATION COATING AND CHEMICAL LAB., ABERDEEN PROVING GROUND, MD
C.O. COL RUDOLPH A. AXELSON ACTING DIR. HARRY L. AMMLUNG

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

| PROGRAM | 1971 (ACTUAL) | 1972 (ACT + EST) |
|-----------------------|------------------|---------------------|
| TOTAL RDT+E | 2.591 | 2.432 |
| TOTAL PROCUREMENT | 0.130 | 0.130 |
| TOTAL O+M | 0.105 | 0.080 |
| TOTAL OTHER | 0.001 | 0.010 |
| TOTAL ANNUAL LAB | 2.827 | 2.652 |
| TOTAL INHOUSE | 1.412 | 1.613 |
| TOTAL INHOUSE RDT+E | 1.215 | 1.438 |
| ANNUAL OPERATING COST | 0.141 | 0.141 |

PERSONNEL DATA (END OF FY 1971)

| PERSONNEL | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
|-----------|------------------------|----------------|---------------|--------------|
| MILITARY | 5 | 1 | 6 | 0 |
| CIVILIAN | 44 | 2 | 24 | 20 |
| TOTAL | 49 | 3 | 30 | 20 |

SPACE AND PROPERTY

| ACRES | SPACE (THOUSANDS OF SQUARE FEET) | COST (MILLION \$) |
|-------|-------------------------------------|-------------------|
| | LAB ADMIN OTHER TOTAL | REAL PROP EQUIP |
| 1 | 16.385 1.868 4.508 22.761 | 2.501 0.642 |

...MISSION
MANAGE + DIRECT THE ASSIGNED PORTION OF AMC MAT + FUELS + LUBES PROGRAM
INCLUDES BASIC + APPLIED RESEARCH IN AUTO CHEMICALS, ORGANIC + SEMI OR-
GANIC COATINGS, PAINT CLEANING FUELS + LUBES. COORDINATE THE RESEARCH
PROGRAM OF AMC IN THE FIELD OF FUELS + LUBES + RELATED MATERIALS

...CURRENT IMPORTANT PROGRAMS
DEVELOPMENT OF FULLY COORDINATED FED SPEC FOR LOW LEAD AUTO GASOLINES
DEFINING PERFORMANCE CHARACTERISTICS OF MULTI VISCOSITY ENGINE LUBS
COATINGS TO IMPROVE PROTECTION AND OPERATIONAL RELIABILITY OF MATERIAL
FUNCTIONAL CLEANING COMPOUNDS AND PAINT REMOVERS
INCREASE THE STABILITY OF ANTIFREEZE CORROSION INHIBITOR

...FUNCTIONS/EQUIPMENT/CAPABILITIES
SPECTROPHOTOMETERS
ACCELERATED WEATHERING MACHINE
CORROSION TEST CABINETS
GAS CHROMATOGRAPHS
PROGRAMMED HUMIDITY CHAMBERS
FUEL COKER
SUB ZERO TEST CABINET
BRAKE FLUID STROKING UNIT
TEMPERATURE FLOW CORROSION UNIT
SPRAY BOOTH
AUTOMATIC VAPOR/LIQUID ANALYZER
TWO GENERAL PURPOSE LABORATORY BUILDINGS AND EXPOSURE FARM

INSTALLATION COLD REGIONS RSCH + ENGR LAB, HANOVER, N. H.

C.O + DIR. LTC JOSEPH F. CASTRO

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 5.502 | 5.517 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.266 | 0.170 |
| TOTAL OTHER | 0.498 | 0.468 |
| TOTAL ANNUAL LAB | 6.266 | 6.155 |
| TOTAL INHOUSE | 5.398 | 5.258 |
| TOTAL INHOUSE RDT+E | 4.695 | 4.429 |
| ANNUAL OPERATING COST | 1.250 | 1.400 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 41 | 4 | 61 | | 0 |
| CIVILIAN | 218 | 21 | 80 | | 138 |
| TOTAL | 259 | 25 | 141 | | 138 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|---------|---------|-------------------|-----------|
| | SPACE (THOUSANDS OF SQUARE FEET) | LAB | ADMIN | OTHER | TOTAL | REAL PROP |
| 631 | 19.013 | 9.848 | 108.415 | 137.276 | 3.906 | 4.133 |

...MISSION

AS THE ARMY LABORATORY FOR SCIENCE AND TECHNOLOGY IN COLD REGIONS USACRREL CONDUCTS AND COORDINATES RESEARCH AND SURVEILLANCE OF TECHNOLOGY APPLICABLE TO THE ARMY'S NEEDS IN THOSE GEOGRAPHIC AREAS OF THE WORLD WHERE COLD PRESENTS A SEVERE PROBLEM AT LEAST ONE YEAR IN TEN

...CURRENT IMPORTANT PROGRAMS

ENGINEERING CRITERIA FOR DESIGN AND CONSTRUCTION IN COLD REGIONS
COLD REGIONS RESEARCH FOR MILITARY PURPOSES
ARCTIC SURFACE EFFECTS VEHICLE PROGRAM
DEVELOPMENT OF TECHNICAL AND FIELD MANUALS CONCERNING COLD REGIONS
INTERNATIONAL BIOLOGICAL PROGRAM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE MAIN LABORATORY AT USACRREL CONTAINS 24 COLDLABS WHICH CAN BE OPERATED TO -580F, SPECIAL TESTING APPARATUS FOR FROZEN MATERIALS, A CHEMICAL LAB, AN ELECTRON MICROSCOPE LAB, A ROCK MECHANICS LAB, AND SOILS PROCESSING LAB. FIELD WORK SUPPORT IN ALASKA IS PROVIDED BY A FIELD STATION AT FAIRBANKS. REPRESENTATIVE AREAS OF COMPETENCE AMONG USACRRELS SCIENTISTS AND ENGINEERS INCLUDE BIOLOGY BIOCHEMISTRY METEOROLOGY CHEMICAL ENGINEERING CIVIL ENGINEERING MARINE ENGINEERING MECHANICAL ENGINEERING GEOLOGY SANITARY ENGINEERING ELECTRONICS ELECTRICAL ENGINEERING PHYSICS CHEMISTRY HYDROLOGY GEOPHYSICS

INSTALLATION COMBAT SURVEILLANCE GROUP, FT. MONMOUTH, NJ.

C.O. AND DIR. COL JAMES H. DAVIS DEPUTY DIR. HERBERT GOLDWAG

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 9.370 | 18.505 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.000 | 0.000 |
| TOTAL ANNUAL LAB | 9.370 | 18.505 |
| TOTAL INHOUSE | 1.095 | 5.955 |
| TOTAL INHOUSE RDT+E | 1.095 | 5.955 |
| ANNUAL OPERATING COST | 0.400 | 3.100 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 67 | 2 | 16 | | 51 |
| CIVILIAN | 283 | 6 | 183 | | 100 |
| TOTAL | 350 | 8 | 199 | | 151 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|--------|---------|-------------------|--------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 71 | 95.870 | 7.281 | 18.468 | 121.619 | 2.418 | 15.773 |

...MISSION

R+D OF EQUIPMENTS FOR COMBAT SURVEILLANCE, TARGET ACQUISITION, IDENTIFICATION-FRIEND-OR-FOE, RADIOLOGICAL SURVEY. APPLY FOLLOWING TECHNOLOGIES- RADAR, I-R, LIGHT, SOUND, SEISMICS, NUCLEONICS, ELECTRO-OPTICS, PHOTOGRAPHY, GEOPHYSICS, IMAGE INTERPRETATION, DATA TRANSFER AND DRONES

...CURRENT IMPORTANT PROGRAMS

ADV DEV AND SUPPORTING TECHNOLOGY FOR ARTILLERY LOCATING RADAR AN/MPQ-ENGR DEV OF MOBILE, HELI-LIFTED, MORTAR-LOCATING RADAR AN/TPC-36
ENGR DEV + LIM PRODUCTION OF MOVING-TARGET LOCATING RADAR SET AN/TPS-58
ENGR DEV OF LASER DESIGNATOR TRACKER SYSTEM LCIS AN/VAS-8
REMOTELY MONITORED BATTLEFIELD SENSOR SYSTEM REMBASS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PHOTO PROCESSING, OPTICAL TEST, LENS RESOLUTION TEST PATTERN FACILITIES
FAC INCL DARK ROOMS, CHEM LABS. RADAR TECHNIQUES DEV FAC INCL MICROWAVE DARK ROOM, ANTENNA PATTERN + TEST RANGE, 65FT HIGH RADAR TEST PLATFORM FIVE OUTDOOR + ONE INDOOR RANGES INSTRUMENTED FROM 30 MC TO 70 GS PER SEC. MOBILE SPECTRAL AND TIME-DISTRIBUTION MEASUREMENT FAC GOOD FROM 2900 A TO INTERMEDIATE IR. OPTICS FACILITY FOR MEASURING DETECTIVITY OF ELEMENTS, OUTPUT OF SOURCES, TRANSMISSION CHARACTERISTICS. LASER TEST + MEASUREMENT FAC FOR LASER SYSTEM COMPONENTS. RADAR INSTRUMENTATION FAC CAPABLE OF TRACKING X-BAND RADAR AND COLLECTING AND RECORDING POSITION, VELOCITY, AND SIGNAL STRENGTH HAS S-BAND SHORT-RANGE SEARCH CAPABILITY

INSTALLATION COMMUNICATIONS + ADP LAB. FORT MONMOUTH, N.J.

C.O. AND DIR. COL JOHN D. MITCHELL

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 30.784 | 19.227 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.305 | 0.272 |
| TOTAL ANNUAL LAB | 31.089 | 18.499 |
| TOTAL INHOUSE | 15.307 | 12.818 |
| TOTAL INHOUSE RDT+E | 15.002 | 12.546 |
| ANNUAL OPERATING COST | 3.457 | 3.664 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 33 | 0 | 21 | | 12 |
| CIVILIAN | 355 | 7 | 245 | | 110 |
| TOTAL | 388 | 7 | 266 | | 122 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|-------|--------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 12 | 75.305 | 7.389 | 1.015 | 83.709 | 2.000 | 6.987 |

...MISSION

TO PERFORM R+D ACTIVITIES RELATED TO COMMUNICATIONS + ADP EQUIPMENTS AND SYSTEMS WHICH INCLUDE THE FIELDS OF RADIO, TELEPHONIC, TELEGRAPHIC AND FACSIMILE COMMUNICATIONS ADP TECHNIQUES + DATA STORAGE COMMUNICATION SECURITY ELECTROMAGNETIC COMPATIBILITY AND COMMUNICATING PROCESSES.

...CURRENT IMPORTANT PROGRAMS

TACTICAL RADIO COMMUNICATIONS SYSTEM TRCS
 RADIO SET AN/PRC-70
 AACOMS AN/TSQ-85, AN/TTC-38, AN/UGC-76
 ARTADS TACFIRE, TOS
 ULTRA RELIABLE RADIO

...FUNCTIONS/EQUIPMENT/CAPABILITIES

LAB SPACES, TEST INSTRUMENTS + SPECIALIZED ELECTRONIC, MECHANICAL AND OPTICAL EQUIPMENT TO PERFORM DESIGN, FABRICATION + TESTING OF ELECTRONIC CIRCUITS/COMPONENTS/EQUIPMENTS IN DISPLAY, PRINTING, SPEECH, NARROW AND WIDE BAND RADIOS FROM LOW TO LIGHT FREQUENCY RANGE, CONVENTIONAL AND ADVANCED MULTIPLEXING, SWITCHING, ERROR DETECTION + CODING, ANTENNA AND PROPAGATION TECHNOLOGIES SMALL SCALE COMPUTERS TO TEST + EVALUATE ADVANCED COMPUTER CONCEPTS + SUBSYSTEM/SYSTEM SOFTWARE + HARDWARE FIXED + MOBILE TACTICAL RADIO/MODEM/MULTIPLEXING/SWITCHING EQUIPMENTS TO SIMULATE FIELD CONFIGURATIONS FOR TEST, DATA COLLECTION + EVALUATION OF EXISTING EQUIPMENT/PROPAGATION/INTERFACE PROBLEMS ANTENNA TEST FACILITY + SHIELDED ROOMS FOR MEASURING OF + ESTABLISHING DOD STANDARDS FOR ELECTROMAGNETIC COMPATIBILITY, RADIATION + PROPAGATION.

INSTALLATION CONSTRUCTION ENGR. RESEARCH LAB., URBANA, ILL.

DIR. COL E.S. TOWNSLEY DEPUTY DIR. L.R. SHAFFER

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 3.484 | 4.069 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.544 | 0.380 |
| TOTAL OTHER | 0.000 | 0.000 |
| TOTAL ANNUAL LAB | 4.028 | 4.449 |
| TOTAL INHOUSE | 3.533 | 3.594 |
| TOTAL INHOUSE RDT+E | 3.029 | 3.249 |
| ANNUAL OPERATING COST | 1.030 | 1.070 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PROF | | |
| MILITARY | 3 | 2 | 12 | | 0 |
| CIVILIAN | 141 | 19 | 63 | | 78 |
| TOTAL | 144 | 21 | 75 | | 78 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|--------------------|--------|-------|---------|-------------------|-------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 15 | 68.875 | 32.075 | 0.000 | 100.950 | 3.481 | 1.795 |

...MISSION

TO PLAN, EXECUTE AND EVALUATE RESEARCH TO OBTAIN THE BEST COMBINATION OF ENGINEERING, DESIGN, CONSTRUCTION, MAINTENANCE AND OPERATION TO PROVIDE FACILITIES FOR THE MILITARY ESTABLISHMENT AND OTHER AGENCIES AND TO DISSEMINATE THE RESEARCH RESULTS

...CURRENT IMPORTANT PROGRAMS

DEVELOPMENT OF MATERIALS FOR PERMANENT MILITARY CONSTRUCTION
DEVELOPMENT OF IMPROVED DESIGN, CONSTRUCTION AND MANAGEMENT TECHNIQUES
DEVELOPMENT OF MILITARY HOUSING SYSTEMS
INDUSTRIALIZED BUILDINGS STUDY FOR MILITARY CONSTRUCTION APPLICATIONS
DEVELOPMENT OF PAVEMENT MANAGEMENT SYSTEMS FOR AIRFIELD PAVEMENTS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONTROLLED ENVIRONMENT CHAMBER, 1000K CLOSED-LOOP MATERIALS TEST SYSTEM, 500K UNIVERSAL TESTING MACHINE, 10MW RESISTANCE LOAD BANK AND INSTRUMENTATION, X-RAY EQUIPMENT, DYNAMIC TENSION ANALYSIS EQUIPMENT SYSTEM, SEMI AUTOMATIC WELDING EQUIPMENT, DIGITAL RECORDING AND ANALYSIS EQUIPMENT
NON-DESTRUCTIVE TESTING FACILITY, VACUUM INDUCTION MELTING EQUIPMENT, METALLOGRAPHIC SAMPLE PREPARATION AND RESEARCH METALLOGRAPH, TEST AND EVALUATION EQUIPMENT FOR MEASUREMENTS OF PRESSURE, VELOCITY, LINEAR AND ANGULAR DISPLACEMENT AND VIBRATION AMPLITUDE AND FREQUENCY.
FACILITIES CAPABILITIES INCLUDE SYSTEMS BUILDINGS METHODS, PAVEMENT SYSTEMS MODELLING, COMPUTER BASED DESIGN AND CONSTRUCTION MANAGEMENT TECHNIQUES, UTILITY SYSTEM DESIGN TECHNIQUES, HARDENED FACILITIES ANALYSIS, ENVIRONMENTAL QUALITY MANAGEMENT, POLLUTION STUDY AND MILITARY HOUSING

INSTALLATION DESERET TEST CENTER(LABS) DUGWAY, UTAH

C.O. BRIG GEN MAX ETKIN CHIEF SCIENTIST MORTIMER A. ROTHENBERG

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

| PROGRAM | 1971 (ACTUAL) | 1972 (ACT + EST) |
|-----------------------|------------------|---------------------|
| TOTAL RDT+E | 15.636 | 13.355 |
| TOTAL PROCUREMENT | 0.285 | 0.452 |
| TOTAL O+M | 0.854 | 0.892 |
| TOTAL OTHER | 3.016 | 3.114 |
| TOTAL ANNUAL LAB | 19.791 | 17.809 |
| TOTAL INHOUSE | 18.070 | 16.529 |
| TOTAL INHOUSE RDT+E | 13.915 | 12.075 |
| ANNUAL OPERATING COST | 4.953 | 4.404 |

PERSONNEL DATA (END OF FY 1971)

| PERSONNEL | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
|-----------|------------------------|----------------|---------------|--------------|
| MILITARY | 460 | 6 | 72 | 388 |
| CIVILIAN | 1099 | 14 | 137 | 962 |
| TOTAL | 1559 | 20 | 209 | 1350 |

SPACE AND PROPERTY

| ACRES | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | COST (MILLION \$) REAL PROP | EQUIP |
|--------|-------------------------|---------|---------|---------|--------------------------------|--------|
| 846302 | 200.463 | 139.594 | 330.395 | 670.452 | 68.969 | 19.406 |

...MISSION

PLAN+CONDUCT TESTS TO ASSESS MIL VALUE OF CHEM WPNS+CHEM BIO DEFENSE SYS
PLAN+CONDUCT TESTS TO SUPPORT RESEARCH AND DEVELOPMENT
INVESTIGATE CB TECH METEOROLOGY ECOLOGY AND EPIDEMIOLOGY
PROVIDE BASIS FOR DEV OF NEW OPER AND LOG CONCEPTS FOR EMPL OF NEW SYS

...CURRENT IMPORTANT PROGRAMS

TEST TECH BINARY G AGENT SYSTEMS
TEST TECH CHEMICAL INCAPACITATING AGENT SYSTEMS
HIGH ALTITUDE DIFFUSION STUDIES
BIOLOGICAL PERSISTENCY + SECONDARY AEROSOL SAMPLING METHODOLOGY
U + G AGENT PERSISTENCY METHODOLOGY

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TEST TECH BINARY SYSTEMS CAPACITY
TEST TECH INCAPACITATING AGENTS
TEST TECH RIOT CONTROL AGENTS
BIOLOGICAL THREAT EVALUATIONS
DECONTAMINATION PROCEDURES C/B TECHNOLOGY
DETECTION RAPID WARNING SYSTEMS EVALUATION
ENVIRONMENTAL TEST CAPACITY
PHYSICAL TEST CAPABILITY FOR DEVELOPED WEAPON SYSTEMS
DEFENSIVE EXPOSURE CHAMBER-HUMIDITY TEMPERATURE CONTROLLED
VEHICULAR ACQUISITION TRACKING SYSTEM
GRIDS FOR LARGE SCALE C/B TEST CAPACITY
AUTO DATA ACQUISITION SYS FOR METEOROLOGICAL PARAMETER MEASUREMENTS

INSTALLATION DEVELOPMENT AND PROOF SERVICES, APG, MD.

C.O. COL WARREN D. HODGES TECH. DIR. F.P. WITT

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 9.063 | 9.300 |
| TOTAL PROCUREMENT | 16.123 | 16.580 |
| TOTAL O+M | 1.012 | 1.057 |
| TOTAL OTHER | 0.723 | 1.396 |
| TOTAL ANNUAL LAB | 26.921 | 28.333 |
| TOTAL INHOUSE | 26.660 | 28.157 |
| TOTAL INHOUSE RDT+E | 9.007 | 9.230 |
| ANNUAL OPERATING COST | 6.125 | 6.897 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 232 | 2 | 79 | | 153 |
| CIVILIAN | 1131 | 2 | 153 | | 938 |
| TOTAL | 1363 | 4 | 272 | | 1091 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|--------|---------|----------|-------------------|--------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 68700 | 84.400 | 78.800 | 916.800 | 1080.000 | 47.200 | 31.000 |

...MISSION

PLAN CONDUCT + REPT RESULTS OF ENGR + OTHER TESTS OF WPNS WPNS SYS FIRE
CON SURV + TGT ACQ EQUIP ITEMS OF AMMO + MUN COMPONENTS CBT VEH OTHER
AUTMV MAT GEN EQUIP SUCH AS GENERATORS + AIR CONDS + OTHER MAT AS ASGD
PROC + CON ISS OF ARMOR PLATE FOR TESTS BY USAMC INSTLS + ACTIVITIES

...CURRENT IMPORTANT PROGRAMS

INVEST OF INBORE PREMATURE 175MM GUN WITH M437 PROJ
PROJECTILE DESIGN FOR 152MM APFSDS
ENGR TEST OF M60A1E2 TANKS
ENGR DEV TEST OF ARMOR FOR XM706 ARMORED CAR
ENGR DESIGN OF IMP UNIVERSAL MECH TIME FUZES MTSQ XM577 + XM582E1

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PLAN DIR + CON AN R+D PROG FOR TEST INSTR TEST FAC + TEST METHODOLOGY TO
SPT CURR + FUTURE RQMTS IN ASGD MSN AREA DESIGN DEV + PROC BALLISTIC +
OTHER TEST INSTR RQRD BY TEST PLAN CHANGES IN TEST METHODOLOGY OR IM-
PROVE OP EFF TEST AREA 68700 ACRES RANGE TO LAND IMPACT 26000 M RANGE TO
WATER IMPACT 30000 M 41 M1 OF AUTMV CRS INCL 27 SP ENGR TEST CRS + OB-
STACLES VARIETY OF ENVIRON OR COND EQUIP SP CHAMBERS FOR SUBJ EQUIP TO
DUST SALT SPRAY OR SOLAR RADN ISOLATED VIBRATION TEST FAC WHICH PERMITS
SHAKING EXPLO EQUIP SIMULTANEOUSLY WITH TEMP CONDITICKING FAC FOR CON
TESTS OF ELEC CON + GUID EQUIP HIGH FREQUENCY SOURCE WHICH PERMITS TEST-
ING ALL TYPES OF MAT IN PRESENCE OF A HIGH INTENSITY ELEC MAGNETIC RADN
IS AVAL SP FAC FOR TEST OF ARMOR PLATE SP VEL + TGT EQUIP IS AVAL FOR
OBSNS DURING RAPID FIRE AS IS A RKT TRACK FOR CCN TML BALLISTIC TESTS

INSTALLATION EDGEWOOD ARSENAL LABS., EDGEWOOD ARSENAL, MD

C.O. COL JOHN K. STONER, JR. TECH. DIR. DR. B.L. HARRIS

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 29.504 | 25.513 |
| TOTAL PROCUREMENT | 5.953 | 5.458 |
| TOTAL O+M | 4.153 | 3.647 |
| TOTAL OTHER | 2.334 | 2.321 |
| TOTAL ANNUAL LAB | 41.944 | 36.939 |
| TOTAL INHOUSE | 37.490 | 35.861 |
| TOTAL INHOUSE RDT+E | 25.050 | 24.435 |
| ANNUAL OPERATING COST | 15.403 | 19.428 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 208 | 54 | 139 | 69 |
| CIVILIAN | 1322 | 62 | 538 | 784 |
| TOTAL | 1530 | 116 | 677 | 853 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|---------|---------|---------|-------------------|--------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | TOTAL | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | | | |
| 4055 | 679.877 | 122.839 | 103.630 | 906.346 | 19.540 | 10.500 |

...MISSION

CLASS II ACTIVITY CONDUCTING A RESEARCH AND DEVELOPMENT MISSION FOR ARMY CHEMICAL MUNITIONS AND DEFENSIVE ITEMS. INCLUDES BASIC RESEARCH AND GENERAL INVESTIGATIONS AS WELL AS EXPLORATORY, ADVANCED AND ENGINEERING DEVELOPMENT OF MATERIAL.

...CURRENT IMPORTANT PROGRAMS

PROPHYLAXIS AGAINST AND TREATMENT OF CHEMICAL AGENT CASUALTIES
CHEMICAL AGENT ALARM TECHNIQUES
PHYSICAL PROTECTION AGAINST CHEMICAL ATTACK
DEVELOPMENT OF BINARY CHEMICAL AGENTS MUNITIONS SYSTEMS
DEVELOPMENT OF MODULAR COLLECTIVE PROTECTION EQUIPMENT

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCT DOD RSCH OF ANTIPERS CML AGTS/TOXICOLOGY-PHYSIOLOGY + PHARM OF CML COMPOUNDS + ANTIPERS-ANTIMAT FLAME-INCEND AGTS/DA RSCH OF DEFENSE AGAINST CML ATTACK + DISSEM-DISPERSION OF CML MUNITIONS/AERODYNAMICS RSCH/INVEST SIMULANTS + TRNG AGTS/DEV CML AGT PROCESS-TEST + ASSESS TECHNOLOGY/DEV CIVIL DISTURB-RIOT CONTROL SYS/DEV PROTECTIVE EQUIP + WARNING-DETECTION MAT FOR DEFENSE AGAINST CML ATTACK + DEV CML AGENT MUNITIONS SYSTEMS.
MAJOR EQUIP IS CONTAINED IN A COMPLEX OF ENGR + LAB AREAS + INCLUDES CML PILOT PLTS-MUN FILLING-ENGR DESIGN + EXP FAB SHOPS AERSOL DISSEM TEST CHAMBERS PYROTECH MISING-LOADING + HANDLING FAC INDCOR BALLISTIC RANGE SUBSONIC-SUPERSONIC + TRANSONIC WIND TUNNELS A COMPLETE CLINICAL RESEARCH FACILITY + AN ANIMAL BREEDING + HOLDING FACILITY.

INSTALLATION ELECTRONICS PROVING GROUND, FT. HUACHUCA, ARIZ
C.O. COL WALLACE D. ENDERLE CHIEF SCIENTIST DR. GEORGE E. SHAFER

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 8.717 | 8.408 |
| TOTAL PROCUREMENT | 2.403 | 1.382 |
| TOTAL O+M | 0.016 | 0.016 |
| TOTAL OTHER | 2.999 | 2.767 |
| TOTAL ANNUAL LAB | 14.135 | 12.573 |
| TOTAL INHOUSE | 10.551 | 9.020 |
| TOTAL INHOUSE RDT+E | 5.470 | 5.270 |
| ANNUAL OPERATING COST | 2.241 | 2.263 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 449 | 0 | 124 | 325 |
| CIVILIAN | 260 | 1 | 69 | 191 |
| TOTAL | 709 | 1 | 193 | 516 |

| ACRES | SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET) | | | | COST (MILLION \$) | |
|-------|--|---------|-------|---------|-------------------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 9231 | 0.000 | 174.526 | 0.000 | 174.526 | 4.989 | 34.100 |

...MISSION
OP USAEPG INCL ELECTROMAGNETIC ENVIRONMENTAL ECM VULNERABILITY + SYS
TEST FAC. PLAN CDT EVAL + REPORT ON ET OF COMMEL + AVIONICS EQUIP + SVC
TEST ON DIV COMMEL EQUIP. PROV TECH + LOG CONSULTATION SVC TO OTHER DCD
AGENCIES ON TEST + EVAL ACTIVITIES, IN-PROCESS REVIEWS, SPEC COORD.

...CURRENT IMPORTANT PROGRAMS
METHODS OF MEASURING REFRACTIVITY ERROR.
AUTOMATIC TEST EQUIPMENT FOR COMMUNICATIONS ELECTRONICS.
INFRARED SYSTEM SENSITIVITY STUDY FOR 1972-80.
INFRARED OPTICAL EVALUATION DATA CONTROL SYSTEM.
INFRARED OPTICAL PROPAGATION STUDY.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PLAN, CONDUCT, AND REPORT ON ENGINEERING TESTS, CHECK TESTS, INITIAL
PRODUCTION TESTS, APPROPRIATE PREPRODUCTION TESTS, AND ASSIGNED SERVICE
TESTS. PLAN, CONDUCT, AND REPORT ON EMC AND ECM TEST ANALYSES AS APPLIED
TO COMMUNICATIONS-ELECTRONICS EQUIPMENT/SYSTEMS. OPERATE THE US ARMY
ELECTRONIC PROVING GROUND TO INCLUDE AN ELECTROMAGNETIC ENVIRONMENTAL
TEST FACILITY, A SPECTRUM SIGNATURE COLLECTION FACILITY, AND A SYSTEM
TEST FACILITY. PROVIDE ADVICE TO PROPONENT AGENCIES AND MATERIEL
DEVELOPERS DURING THEIR DEVELOPMENT OF MATERIEL. CONDUCT OTHER TESTS AND
EVALUATIONS AS DIRECTED BY THE COMMANDING GENERAL, USATECOM.

INSTALLATION ELECTRONIC TECHNOLOGY + DEVICES LAB, FT MONMOUTH, N.J.

DIR. DR. HANS K. ZIEGLER

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 25.733 | 12.550 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.179 | 0.172 |
| TOTAL ANNUAL LAB | 25.903 | 12.720 |
| TOTAL INHOUSE | 14.008 | 8.916 |
| TOTAL INHOUSE RDT+E | 13.838 | 8.746 |
| ANNUAL OPERATING COST | 4.312 | 4.312 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 17 | 9 | 14 | | 3 |
| CIVILIAN | 452 | 52 | 303 | | 149 |
| TOTAL | 469 | 61 | 317 | | 152 |

| ACRES | SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET) | | | | COST (MILLION \$) | |
|-------|--|-------|-------|---------|-------------------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 247 | 163.096 | 4.080 | 4.500 | 171.676 | 5.832 | 11.412 |

...MISSION

PLAN AND CONDUCT EXPLORATORY R AND D OF ELECTRONIC MATERIALS PARTS AND DEVICES ASSEMBLIES AND RELATED DISCIPLINES AND TECHNIQUES APPLICABLE TO EQUIPMENTS AND SYSTEMS. CONDUCTS RESEARCH IN THE PREPARATION COMPOSITION, STRUCTURE AND PROPERTIES OF ELECTRONIC MATERIALS AND RELATED PHENOMENA

...CURRENT IMPORTANT PROGRAMS

RESEARCH IN ELECTRONICS, PHYSICS, CHEMISTRY, MATHEMATICS, AND NUCLEAR PHYSICS
R AND D OF ELECTRONIC DEVICES, MATERIALS, TECHNIQUES AND ASSEMBLIES
R AND D OF BATTERIES, CHARGERS, POWER CONDITIONING, THERMAL ENERGY FUELCELL
R AND D OF INTEGRATED ELECTRONICS FOR COMBAT EQUIPMENT
R AND D OF GENERAL PURPOSE TEST EQUIPMENT FOR ELECTRONIC SYSTEMS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FACILITIES ARE AVAILABLE FOR PERFORMING EXPLORATORY RESEARCH IN PHYSICS AND CHEMISTRY OF MATERIALS AND FOR CONDUCTING R AND D OF ELECTRONIC PARTS DEVICES AND ASSEMBLIES. LABORATORIES FOR PERFORMING R AND D IN THESE AREAS ARE EQUIPPED WITH THE NORMAL COMPLEMENT OF STANDARD LAB INSTRUMENTATION AND FACILITIES. WORK AREAS INCLUDE FACILITIES FOR DESIGNING, FABRICATING AND TESTING INTEGRATED CIRCUITS, VARIETIES OF SEMICONDUCTOR DEVICES, ELECTRON TUBES AND PIEZOELECTRIC OR ATOMIC FREQUENCY CONTROL DEVICES. FACILITIES ARE AVAILABLE FOR SIMULATION AND MEASUREMENT OF LOW AND HIGH POWER LASER PROPAGATION, NUCLEAR EFFECTS, AND FOR THE FABRICATION OF DISPLAY, STORAGE AND PICKUP DEVICES. ALSO FOR R AND D IN POWER SOURCES AND FOR ELECTRONIC MATERIAL CHARACTERIZATION. WORLD WIDE TRACKING STATIONS ARE AVAILABLE FOR STUDYING EFFECTS OF SOLAR RAD. AND IONOSPHERIC PHEN. ON EM PROPAGATION

INSTALLATION ELECTRONIC WARFARE LAB, FT MONMOUTH, N.J.

C.O. AND DIR. COL JAS D. DONNELLY DEPUTY DIR. C.K. SHULTES

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.600 | 21.657 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.304 |
| TOTAL OTHER | 0.000 | 0.000 |
| TOTAL ANNUAL LAB | 0.600 | 21.961 |
| TOTAL INHOUSE | 0.600 | 13.310 |
| TOTAL INHOUSE RDT+E | 0.600 | 13.014 |
| ANNUAL OPERATING COST | 3.463 | 4.213 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 89 | 1 | 16 | 73 |
| CIVILIAN | 328 | 2 | 176 | 152 |
| TOTAL | 417 | 3 | 192 | 225 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------------------|--------|--------|---------|-------------------|-----------|
| | SPACE (THOUSANDS OF SQUARE FEET) | LAB | ADMIN | OTHER | TOTAL | REAL PROP |
| 0 | 31.576 | 57.853 | 19.771 | 109.197 | 1.200 | 34.165 |

...MISSION

ECOM R+D ESSENTIAL TO ELECTRONIC WARFARE + SELECTED AREAS CF INTELL.
ENCOMPASSES APPLD R+D INCL QRC DEV + SPT IN INTERCEPT, DF, SIG ANALY,
JAMMING, DECEPT, SIG INTELL, ACOUST INTELL, AGENT EQUIP, SECURITY, CNTR INTEL,
VULNERABILITY + COUNTER COUNTERMEASURES.

...CURRENT IMPORTANT PROGRAMS

EMITTER LOCATION + IDENTIFICATION ASSEMBLIES AIRBORNE .
PROTECTION OF ARMY ACFT AGAINST IR MISSILES.
GROUND MOBILE NON-COMM COLLECTION ASSEMBLIES.
MISSILE ELECTRONIC WARFARE.
TECHNICAL SURVEILLANCE AIDS + COUNTERMEASURES.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ECM EQUIP + DEVICE R+D FACILITY, MISSILE EW, DF TEST FACILITY. MAJOR EQUIP
VT FUZE SIMULATOR, LASERS, RTMS, ABN ECM LABS, IR TEST RANGE, ECM TEST RANGE,
ANECHOIC CHAMBER, ANTENNA PATTERN RANGE, 2MHz-40GHz. CAPABILITIES
CONCEIVE, DESIGN, DEVELOP ECM AGAINST C-E EQUIP. CONCEIVE, DESIGN, DEVELOP
NEW EW SYS FOR SIGINT, ELINT, COMINT, QRC APPLICATIONS. MEASURE VUL TO ECM
OF ARMY GUIDED MISSILES. PROVIDE LINEAR, SQUARE ROOT LOG ANTENNA PATTERN
PRESENTATIONS.

INSTALLATION ENGINEER TOPOGRAPHIC LAB., FT BELVOIR, VA.

C.O. COL JOHN E. WAGNER TECH. DIR. GILBERT G. LORENZ

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 10.853 | 12.856 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.160 | 0.223 |
| TOTAL ANNUAL LAB | 11.013 | 13.079 |
| TOTAL INHOUSE | 5.144 | 6.535 |
| TOTAL INHOUSE RDT+E | 4.984 | 6.312 |
| ANNUAL OPERATING COST | 0.490 | 0.550 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 15 | 1 | 16 | | 0 |
| CIVILIAN | 239 | 13 | 137 | | 102 |
| TOTAL | 254 | 14 | 153 | | 102 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|-------|--------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 0 | 47.304 | 9.980 | 2.660 | 59.944 | 0.000 | 9.358 |

...MISSION

PRINCIPAL FIELD ACTIVITY OF THE ARMY FOR ACCOMPLISHING RESEARCH AND DEVELOPMENT OF EQUIPMENT, PROCEDURES AND TECHNIQUES APPLICABLE TO THE TOPOGRAPHIC SCIENCES TO INCLUDE MAPPING, SURVEYING, GEODESY, PHOTO INTERPRETATION, AND MILITARY GEOGRAPHIC INFORMATION.

...CURRENT IMPORTANT PROGRAMS

DEVELOPMENT OF SEMI-AUTOMATIC CARTOGRAPHIC EQUIPMENT
DEVELOPMENT OF AN ALL-WEATHER RADAR MAPPING SYSTEM
DEVELOPMENT OF MILITARY GEOGRAPHIC INTELLIGENCE CONCEPTS AND SYSTEMS
DEVELOPMENT OF A LONG RANGE POSITION DETERMINING SYSTEM
DEVELOPMENT OF A POSITION AND AZIMUTH DETERMINING SYSTEM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE US ARMY ENGINEER TOPOGRAPHIC LABORATORIES PERFORM BASIC AND APPLIED RESEARCH, AND EXPLORATORY, ADVANCED, AND ENGINEERING DEVELOPMENT PERTAINING TO TOPOGRAPHIC MAPPING, GEODESY, SURVEYING, GEOGRAPHY, PHOTO INTERPRETATION, AND MILITARY GEOGRAPHIC INTELLIGENCE. IT CARRIES OUT A PROGRAM WHICH CONSISTS OF BOTH INTERNAL AND CONTRACTUAL EFFORTS ADDRESSING THE FEASIBILITY OF CONCEPTS AS WELL AS THE FABRICATION OF PROTOTYPE AND ENGINEERING EQUIPMENT SATISFYING BOTH GENERAL AND SPECIFIC MILITARY FIELD AND BASE PLANT REQUIREMENTS.

INSTALLATION ENGINEER WATERWAYS EXPERIMENT STA., VICKSBURG, MISS.

DIR. COL ERNEST D. PEIXOTTO TECH. DIR. F.R. BROWN

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 10.919 | 13.287 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.413 | 0.244 |
| TOTAL OTHER | 8.179 | 10.143 |
| TOTAL ANNUAL LAB | 19.511 | 23.674 |
| TOTAL INHOUSE | 18.722 | 21.381 |
| TOTAL INHOUSE RDT+E | 10.130 | 10.994 |
| ANNUAL OPERATING COST | 3.859 | 3.907 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 36 | 2 | 43 | | 0 |
| CIVILIAN | 1188 | 33 | 323 | | 865 |
| TOTAL | 1224 | 35 | 366 | | 865 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|--------------------|---------|---------|----------|-------------------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 1884 | 1379.000 | 383.554 | 230.046 | 1992.600 | 14.761 | 22.531 |

...MISSION

MIL+CIV FUNDED ENGR RSCH,DEV+INVES IN HYD,ECOLOGY,PERM+EXPEDIENT PAVEMENTS,SOIL,CONCRETE,EXPLO WPN EFF,EXPLO EXCAVATION,VEH MOBILITY+ENVIRONMENT ASPECTS OF MIL OP.CONSULTANT SVC+TECH LIBRARY.TECH SURVL OF CEMENT AND POZZOLAN TEST PROG.SERVES CE,AMC,DNA,AEC,OCD,AF,NAVY+OTHER AGENCIES.

...CURRENT IMPORTANT PROGRAMS

HYD+MATH MODELING TO SOLVE RIVER,TIDAL,WIND-WAVE,ECOLOGICAL+STRUC PROBS. INVES MEANS OF AQUIRING TERRAIN DATA BY USE OF VARIOUS SENSING DEVICES. NUC+HE RSCH TO DEV CRITERIA FOR ED OF PROTECTIVE STRUC BOTH UGND+UWTR. RSCH.DEV+FORMULATION OF NEW+IMP ENG CRITERIA ON ROADS,STORAGE AREAS,AIR-FIELDS+HELIPORTS.INVES OF CEMENTITIOUS MAT+RSCH OF MASS+STRUC CONCRETE.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CDT RDT+E FOR MANY SPONSORS,PERF GEN INVES IN FLD OF HYD,SOIL MECH,CCN-CRETE,MOBILITY OF MIL VEH,EXPLO EFF,ECOLOGY,EXPLO EXCAVATION+PAVEMENTS. THRU BA+APPLIED RSCH IN THESE +RLT FLD,THE DEV OF METHODS+TECHNIQUES AND THE TESTING OF MAT+EQUIP,ASST IN ACCOMPMT OF THE CIV WORKS+MIL MSN OF CE.WES RESERVATION CNTN BLDGS,TEST SITES,SPECL EQUIP+OTHER PLANT FAC. TEST SITES+FAC FOR SP PURPOSES ARE MAINT IN OTHER AREAS ON PERM OR TEMP BASIS.FAC INCL FLUMES OF DIFF TYPES+SIZES,WAVE+TIDE GENR MACH,DRILL EQUIP,FULLY EQUIPED SOILS LAB,X-RAY DIFFRACTION AND SPECTROSCOPY APPAR, FULLY EQUIPED CONCRETE LAB,LARGE+SMALL BLAST LOAD GENERATOR,200K DYNAMIC LOADER,MOBILITY TEST CARTS,SINGLE+MULTIPLE WHEEL LOAD CARTS FOR TFC,SUR EFF BLAST FAC,HIGH+LOW FREQ VIBRATORS,ELECTRON MICROSCOPE,PHYS TREATMENT LAB,CALBR LAB,FLCT LAB,LARGE SCALE CMPT FAC+ A TECHNICAL LIBRARY.

INSTALLATION FRANKFORD ARSENAL LABS., PHILA., PA.

C.O. COL JAMES L. WALLACE TECH. DIR. DR. SIDNEY ROSS

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 25.150 | 23.032 |
| TOTAL PROCUREMENT | 3.970 | 8.687 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.083 | 0.083 |
| TOTAL ANNUAL LAB | 29.203 | 31.802 |
| TOTAL INHOUSE | 21.307 | 26.093 |
| TOTAL INHOUSE RDT+E | 17.254 | 17.323 |
| ANNUAL OPERATING COST | 4.000 | 4.000 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 18 | 1 | 17 | 1 |
| CIVILIAN | 1567 | 29 | 691 | 876 |
| TOTAL | 1585 | 30 | 708 | 877 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|--------------------|---------|---------|----------|-------------------|-------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 22 | 558.000 | 134.000 | 557.000 | 1249.000 | 0.970 | 9.025 |

...MISSION

COMMODITY CTR SMALL CAL AMMO + PROPELL ACT DEVICES + MULTIPURP TEST EQ
RES IN OPTICAL MTL + NON-FERR METALS + MTL DEGRAD + MYCOLOGY + PWR
TRANS FLUIDS + SYNTH LUBS + PROPELL EXPLOS PYROTECH + LASER COUNTERMEAS
R+D TRACER AMMO DESIGN+DEVELOP ARTY METAL PARTS + MECH TIME FUZE

...CURRENT IMPORTANT PROGRAMS

ARMY SMALL CALIBER AMMUNITION RESEARCH AND ENGINEERING PROGRAM
SMALL CALIBER AMMUNITION MODERNIZATION PROGRAM
AIRCRAFT + ANTI-AIRCRAFT + ARTILLERY + COMBAT VEHICLE FIRE CONTROL
TEST MEASUREMENT AND DIAGNOSTIC EQUIPMENT
LASER COUNTERMEASURES AND PROTECTION RESEARCH AND EXPLORATORY DEVL

...FUNCTIONS/EQUIPMENT/CAPABILITIES

RAPID SCAN SPECTROPHOTOMETER PILOT PLANT TRACER LOADING FACILITY OPTICAL
LAB + DESIGN FACILITY + SHOP LASER TEST FACILITY SOLID STATE PHYSICS LAB
ELECTRON MICROSCOPE XTAL GROWING EQUIP ELECTRON BEAM VACUUM FILM DEPOSITION
EQUIP DYNAMIC PHOTOELASTIC STRESS ANALYSIS EQUIP HIGH SPEED PHOTOGRAPHIC
EQUIP SPACE + ATMOSPHERIC SIMULATOR UNIVAC SS90 COMPUTER HYDRAUL + MECH
POWDER MOLD EQUIP VAC-ARC MELTING FURNACES MICROSCAN X-RAY ANALYZER
RADIO-ISOTOPE LAB MICROBIOLOGY LAB TROPICAL CLIMATE RM EPR SPECTROMETER
DIFF SCAN CALORIMETER PROPELLANT PROCESSING LAB SPECIAL EQUIP FOR
IGNITION + PYROTECH R+D 15 FIRING RANGES HIGH EXPLOSIVES SITE 4 PADS FOR
POINT FUZE DETONATION BALLISTIC MEAS EQUIP DOPPLER RADAR SPECTRA PHOTO-
METER K-BAND MICROWAVE INTERFEROMETER MICROWAVE ANAEC-POIC CHAMBER AUTO-
MATIC CHECK-OUT EQUIP + LAB HOLOGRAPHIC EQUIP FLEXITRON FLASH X-RAY EQ

INSTALLATION GENERAL EQUIPMENT TEST ACTIVITY, FT. LEE, VA.

C.O. LTC DONALD W. ALBERTI TECH. ADV. DR. HOWARD W. HEMBREE

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 2.259 | 1.122 |
| TOTAL PROCUREMENT | 0.377 | 0.229 |
| TOTAL O+M | 0.077 | 0.042 |
| TOTAL OTHER | 1.802 | 0.704 |
| TOTAL ANNUAL LAB | 4.515 | 2.097 |
| TOTAL INHOUSE | 4.498 | 2.097 |
| TOTAL INHOUSE RDT+E | 2.242 | 1.122 |
| ANNUAL OPERATING COST | 1.444 | 0.872 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PROF | | |
| MILITARY | 286 | 0 | 54 | | 232 |
| CIVILIAN | 95 | 1 | 31 | | 64 |
| TOTAL | 381 | 1 | 85 | | 296 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------------------|---------|--------|---------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 453 | 68.589 | 121.625 | 21.360 | 211.574 | 1.500 | 2.314 |

...MISSION

PLAN CONDUCT + REPORT ON SERVICE TESTS CHECK MP CF ED PI IP SS RE LOTS +
MOVAD + OTHER TESTS. PROVIDE REQUIRED TEC + LOG CONSULTATION SVCS TO AMC
OTHER TECOM COMDS DA + DD. PLAN DIRECT + CONTROL R+D PROGRAM FOR TEST
INSTR FAC + METHODOLOGY TO SUPPORT CURRENT + FUTURE TEST REQUIREMENTS

...CURRENT IMPORTANT PROGRAMS

TESTING PROPELLING UNIT OUTBOARD DIESEL
TESTING FORWARD AREA REFUELING EQUIPMENT
TESTING BOAT LANDING INFLATABLE ASSAULT CRAFT 15-MAN
TESTING PILE DRIVING RIG SKI MOUNTED STEEL WITH MOONBEAM ASSEMBLY
TESTING TRUCK FORKLIFT ELECTRIC SOLID RUBBER TIRES 4000 POUND

...FUNCTIONS/EQUIPMENT/CAPABILITIES

COORDINATE PLAN CONDUCT + REPORT TESTING ACTIVITIES DIRECTED BY USATECOM
IDENTIFY POTENTIAL MAINTENANCE PROBLEMS + DETERMINE COMPATIBILITY OF THE
MAN-MACHINE SYSTEM + THE SAFETY OF ITEMS FOR USE BY THE ARMY. RECOMMEND
AS APPROPRIATE SUITABILITY OF MATERIEL TESTED FOR TYPE CLASSIFICATION
PROVIDE FOR ATTENDANCE AT IN-PROCESS REVIEW MEETINGS + OTHER CONF AS REQ
FACILITIES INCLUDE EXPERIMENTAL KITCHEN + FOOD TEST FACILITIES DYNAMIC +
STATIC RAIN COURSE SIX ACCELERATED WEAR COURSES MHE TEST TRACK HIGHWAY +
RAIL TESTING FACILITIES TRANSPORTABILITY LINE HAUL + CARGO LOADING
ADAPTABILITY TEST COURSE COMBAT EFFECTIVENESS TEST FACILITY POL STORAGE
TANKS RADIOACTIVE MATERIALS STORAGE FACILITY ROUGH TERRAIN TEST COURSE
FABRIC EXPOSURE SITE MECHANICAL ENGINEERING + POL EQUIPMENT TEST AREAS
MARINE + PORT FACILITIES AT FT EUSTIS BEACH + OCEAN FRONT AT FT STORY

INSTALLATION HARRY DIAMOND LABS., WASH., D.C.

C.O. COL DAVID W. EINSEL, JR. TECH. DIR. BILLY M. HORTON

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 26.298 | 41.978 |
| TOTAL PROCUREMENT | 25.915 | 16.588 |
| TOTAL O+M | 1.738 | 1.466 |
| TOTAL OTHER | 0.698 | 0.441 |
| TOTAL ANNUAL LAB | 54.649 | 60.385 |
| TOTAL INHOUSE | 28.996 | 26.752 |
| TOTAL INHOUSE RDT+E | 18.807 | 23.938 |
| ANNUAL OPERATING COST | 8.669 | 9.452 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 10 | 1 | 11 | 0 |
| CIVILIAN | 1362 | 42 | 481 | 881 |
| TOTAL | 1372 | 43 | 492 | 881 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|--------|--------|---------|-------------------|--------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 2770 | 281.602 | 46.119 | 54.154 | 381.875 | 11.874 | 22.871 |

...MISSION

RD+E ON INFLUENCE+TIME+COMMAND FUZING+CCM/SIGNATURE ANALYSIS+TARGET
INTERCEPTION/WEAPON SYSTEM SYNTHESIS/INSTRUMENTATION+MEASUREMENT+
SIMULATION OF MATERIALS+COMPONENTS/ADVANCED ENERGY TRANSFORMATION+
CONTROL/LEAD LAB FOR FLUIDICS/LEAD LAB FOR NUCLEAR WEAPONS EFFECTS*

...CURRENT IMPORTANT PROGRAMS

DEV+ENG OF PERSONNEL DETECTION SIGNAL PROCESSORS+WEAPCNRY RADAR*
DEV OF FLUIDIC STABILIZATION SYSTEMS FOR SMALL ARMS+LARGE WEAPONS*
ANALYSIS+MODELING+EXPLOITATION OF SELECTED FOREIGN ORNANCE*
RES+DEV OF HARDENED PROXIMITY FUZING FOR MISSILE REENTRY VEHICLES*
RD+E OF PROXIMITY+ELECTRONIC TIME FUZING FOR ARTILLERY+MORTARS+MINES*

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PLAN+MANAGE+CONDUCT PROGRAMS IN SUPPORT OF ASSIGN MISSIONS*MANAGE FLUID
TECHNOLOGY DEVELOPMENT*PROVIDE CONSULTING SERVICES, TECHNICAL GUIDANCE+
ASSISTANCE TO AMC/OTHER ELEMENTS OF DA+DDO+OTHER GOVT AGENCIES*MAINTAIN
A HIGH DEGREE OF COMPETENCE IN THE APPLICATION OF PHYSICAL SCIENCES TO
THE SOLUTION OF MILITARY PROBLEMS*OPERATE+MAINTAIN SEVERAL HIGHLY
SPECIALIZED FACILITIES EQUIPPED TO SUPPORT THESE FUNCTIONS INCLUDING
FLASH XRAY+PULSE REACTOR FOR NUCL EFFECTS EVALUATIONS/ANECHOIC CHAMBER+
ANTENNA TEST RANGE FOR RADIO ANTENNAS/HIGH PRESSURE SHOCK TUBES FOR STDY
OF HIGH TEMPERATURE GASES/MERCURY ARC PLASMA TUBE, OPTICAL+SPECTROSCOPIC
EQUIPMENT/TEST RANGE FOR EXPERIMENTAL EVALUATION OF FUZES, COMPONENTS+
SUBSYSTEMS/LATITUDE MAGNETIC SIMULATOR FOR SIGNATURE ANALYSIS/TELEMETRY
EQUIPMENT+AIR GUN FOR LABORATORY SIMULATION OF WEAPON FIRING FORCES*

INSTALLATION HUMAN ENG. LABS., ABERDEEN PROVING GROUND, MD.

C.O. COL RUDOLPH A. AXELSON TECH. DIR. CR. JOHN D. WEISZ

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 2.944 | 3.372 |
| TOTAL PROCUREMENT | 0.053 | 0.000 |
| TOTAL O+M | 0.039 | 0.000 |
| TOTAL OTHER | 0.000 | 0.000 |
| TOTAL ANNUAL LAB | 3.036 | 3.372 |
| TOTAL INHOUSE | 2.535 | 2.772 |
| TOTAL INHOUSE RDT+E | 2.443 | 2.772 |
| ANNUAL OPERATING COST | 0.434 | 0.463 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 33 | 1 | 24 | 9 |
| CIVILIAN | 93 | 10 | 51 | 42 |
| TOTAL | 126 | 11 | 75 | 51 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|--------------------|--------|--------|--------|-------------------|-------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 10 | 26.500 | 17.605 | 24.658 | 68.763 | 1.513 | 3.210 |

...MISSION

CONDUCT BASIC AND APPLIED RESEARCH IN HUMAN FACTORS ENGINEERING
DEVELOP NEW HUMAN FACTORS ENGINEERING METHODOLOGY
ESTABLISH AND OPERATE A MANPOWER CHARACTERISTICS DATA BANK
INTEGRATE ALL MNPR CHARACTERISTICS INTO ARMY MATERIEL DEVELOPMENT PROG

...CURRENT IMPORTANT PROGRAMS

HUMAN ENGR LAB BATTALION ARTILLERY TESTS
HUMAN ENGR LAB ARMOR SYSTEM TESTS
HUMAN ENGR LAB HELICOPTER ARMAMENT TESTS
SMALL ARMS EXPERIMENTS
COMMAND CONTROL INFORMATION DISPLAY R AND C

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FIXED WING FLIGHT SIMULATORS
HELICOPTER SIMULATORS
COMMAND AND CONTROL INFORMATION HANDLING SIMULATORS
ANECHOIC CHAMBER
PHYSIOLOGY LABORATORY WITH INSTRUMENTATION
SMALL ARMS TEST FIRING RANGE
ANIMAL SURGICAL FACILITY
NOISE MEASUREMENT AND ANALYSIS INSTRUMENTATION
WOOD WORKING AND METAL WORKING SHOPS
CLOSED CIRCUIT TV INSTRUMENTATION
CENTRAL NERVOUS SYSTEM OUTPUT RECORDING INSTRUMENTATION
HUMAN PERFORMANCE DATA BANK

INSTALLATION INFANTRY BOARD, FT. BENNING, GA.

PRES. COL CHARLES B. THOMAS

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.948 | 1.368 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 1.088 | 1.690 |
| TOTAL ANNUAL LAB | 2.036 | 3.058 |
| TOTAL INHOUSE | 1.883 | 2.946 |
| TOTAL INHOUSE RDT+E | 0.795 | 1.256 |
| ANNUAL OPERATING COST | 0.178 | 0.204 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 160 | 0 | 13 | 147 |
| CIVILIAN | 51 | 0 | 0 | 51 |
| TOTAL | 211 | 0 | 13 | 198 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------------------|--------|--------|--------|-------------------|-----------|
| | SPACE (THOUSANDS OF SQUARE FEET) | LAB | ADMIN | OTHER | TOTAL | REAL PROP |
| 0 | 0.000 | 47.383 | 28.576 | 75.959 | 2.592 | 0.388 |

...MISSION
 PLAN CONDUCT + REPORT TESTS RELATED TO SUITABILITY OF EQUIP FOR ARMY USE
 PERFORM CUSTOMER TESTS TO EXPEDITE DEVELOPMENT + PROCUREMENT TEST PROGS
 CONTROL PROGRAM ON TEST METHODOLOGY INSTRUMENTATION AND FACILITIES
 PROVIDE ADVICE TO DEVELOPERS DURING THEIR DEVELOPMENT OF INFANTRY EQUIP

...CURRENT IMPORTANT PROGRAMS
 EXPANDED SERVICE TEST MEDIUM ANTITANK ASSAULT WEAPON XM47 DRAGON
 STUDY TO IMPROVE TEST METHODOLOGY AND DEVELOP INSTR TEST FACILITIES
 SERVICE TESTS OF NIGHT VISION SIGHTS SECOND GENERATION
 ENGINEER-SERVICE TEST OF NIGHT SIGHT FOR XM47 DRAGON
 SERVICE TEST OF LIGHTWEIGHT LOADCARRYING EQUIPMENT

...FUNCTIONS/EQUIPMENT/CAPABILITIES
 SERVICE TEST EQUIP + ANCILLARY ITEMS USED BY INF FOR FIRE POWER TARGET
 ACQUISITION GROUND SURVEILLANCE FIRE CONTROL + GROUND MOBILITY FIELD
 CLOTHING EQUIP + RATIONS AP MINES CB EQUIP FOR INDIVIDUALS + SMALL UNITS
 AIRBORNE TEST OF EQUIP WORN OR CARRIED BY PARACHUTISTS WHILE JUMPING
 PROVIDE REPRESENTATION FOR IN-PROCESS REVIEWS
 ASSIST IN PREPARATION OF AND REVIEW MATERIEL NEEDS
 PLAN DIRECT AND CONTROL PROGRAM IN TEST METHODOLOGY + INSTRUMENTATION
 EVALUATE + MAKE RECOMMENDATIONS CONCERNING SUITABILITY AND SAFETY OF
 TEST ITEMS FOR OPERATIONAL USE
 KNOWN DISTANCE SMALL ARMS RANGE MORTAR RANGE + INSTRUMENTED ANTITANK
 RANGE DEFENSE RANGE ATTACK RANGE + QUICK FIRE RANGE
 CLIMATIC CHAMBER

INSTALLATION INST.OF DENTAL RSCH, WALTER REED AMC, WASH., D.C.

C.O. COL SURINDAR N. BHASKAR

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.525 | 0.599 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.058 | 0.061 |
| TOTAL OTHER | 0.539 | 0.635 |
| TOTAL ANNUAL LAB | 1.122 | 1.295 |
| TOTAL INHOUSE | 1.122 | 1.295 |
| TOTAL INHOUSE RDT+E | 0.525 | 0.599 |
| ANNUAL OPERATING COST | 0.233 | 0.117 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 57 | 3 | 48 | | 9 |
| CIVILIAN | 25 | 1 | 24 | | 1 |
| TOTAL | 82 | 4 | 72 | | 10 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------------------|-------------|-------------|--------------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| 0 | LAB 7.711 | ADMIN 4.722 | OTHER 1.724 | TOTAL 14.157 | 0.000 | 0.675 |

...MISSION

CONDUCT RESEARCH IN ETIOLOGY, CONTROL AND PREVENTION OF ORAL DISEASE.
DEVELOP SIMPLIFIED TECHNIQUES OF EFFECTIVE TREATMENT INCLUDING MAXILLO-
FACIAL INJURIES. INVESTIGATE PROPERTIES AND USES OF DENTAL MATERIALS.
CONDUCT DENTAL EDUCATION AND TRAINING PROGRAMS.

...CURRENT IMPORTANT PROGRAMS

WATER LAVAGE.
COMBAT RESTORATIVE MATERIALS.
CYANOACRYLATES.
BIODEGRADABLE MATERIALS.
NITINOL.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR EQUIPMENT -- 1. ELECTRON MICROSCOPES, 2. STRESS/FATIGUE TESTING
EQUIPMENT, 3. SPECTROPHOTOMETER, 4. SCINILLATION COUNTER, 5. LYOPHILI-
ZERS, 6. GAS CHROMATOGRAPH, 7. CRYOSTAT, 8. CRYOSURGERY UNIT, 9. DENTAL
OPERATING EQUIPMENT, 10. ULTRACENTRIFUGE, 11. MULTI-CHANNEL PHYSIOLOGIC
RECORDERS, 12. THERMAL ANALYSIS SYSTEM, 13. MICROSTOOLMAKER, 14. MICRO-
SCOPES, 15. STERILIZERS.
CAPABILITIES- FULL SPECTRUM BIOCHEMISTRY, HISTOLOGIC, PATHOLOGIC, MICRO-
BIOLOGIC AND ELECTRON MICROSCOPY LABORATORIES. EXTENSIVE METALLURGICAL
AND MATERIALS TESTING LABORATORY. ANIMAL SURGERY. DENTAL RESEARCH.
EDUCATION.

INSTALLATION INST.OF SURGICAL RSCH. BROOKE AMC, FT SAM HOUSTON,TEX

C.O. LTC BASIL A. PRUITT, JR. TECH. DIR. DR. ARTHUR D. MASON, JR.

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 1.300 | 1.425 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 1.276 | 1.335 |
| TOTAL ANNUAL LAB | 2.576 | 2.760 |
| TOTAL INHOUSE | 2.576 | 2.760 |
| TOTAL INHOUSE RDT+E | 1.300 | 1.425 |
| ANNUAL OPERATING COST | 0.095 | 0.105 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 116 | 22 | 42 | | 74 |
| CIVILIAN | 75 | 3 | 21 | | 54 |
| TOTAL | 191 | 25 | 63 | | 128 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|--------|--------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 1 | 18.424 | 0.800 | 19.000 | 38.224 | 1.860 | 0.868 |

...MISSION
CONDUCT BOTH CLINICAL AND LABORATORY STUDIES IN TREATMENT OF THERMAL AND TRAUMATIC INJURIES. PROVIDE CARE FOR PATIENTS WITH THESE TYPES OF INJURIES. TRAIN OTHERS IN CARE OF SUCH PATIENTS.

...CURRENT IMPORTANT PROGRAMS
STUDY OF POSTBURN HEMODYNAMIC AND PULMONARY CHANGES. EVALUATION AND SYNTHESIS OF TOPICAL AGENTS TO CONTROL INFECTION. STUDY OF ACUTE RENAL FAILURE AND RENAL PHYSIOLOGY. STUDY OF POSTBURN HEMATOLOGY AND IMMUNOLOGY. METABOLIC CHANGES FOLLOWING BURNS AND EFFECTS OF HYPERALIMENTATION.

...FUNCTIONS/EQUIPMENT/CAPABILITIES
OPERATES 60 BEDS FOR SERIOUSLY BURNED AND INJURED PATIENTS. PROVIDES CLINICAL LABORATORY SUPPORT WITH CAPABILITIES IN THE FIELDS OF PATHOLOGY (INCLUDING USE OF ELECTRON MICROSCOPE), MICROBIOLOGY, EXPERIMENTAL SURGERY, RENAL PHYSIOLOGY AND BIOCHEMISTRY. MAINTAINS AN ANIMAL COLONY, ELECTRONIC SHOP, MACHINE SHOP AND SURGICAL LIBRARY.

INSTALLATION LAND WARFARE LAB, ABERDEEN P.G., MD.

C.O. COL R.L. CLARKSON TECH. DIR. DR. R.D. SHELTON

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 6.303 | 8.150 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.606 | 0.000 |
| TOTAL OTHER | 0.255 | 0.280 |
| TOTAL ANNUAL LAB | 7.164 | 8.430 |
| TOTAL INHOUSE | 4.563 | 4.398 |
| TOTAL INHOUSE RDT+E | 3.898 | 4.118 |
| ANNUAL OPERATING COST | 2.276 | 2.366 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 18 | 0 | 15 | 3 |
| CIVILIAN | 124 | 3 | 57 | 67 |
| TOTAL | 142 | 3 | 72 | 70 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|--------|--------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 80 | 39.311 | 2.655 | 12.628 | 54.594 | 0.687 | 0.696 |

...MISSION
TO PROVIDE A CENTRALIZED QUICK REACTION RESEARCH AND DEVELOPMENT
FACILITY FOR ACCOMPLISHING DEVELOPMENT OF SPECIALIZED MILITARY ITEMS
AND FOR THE GENERATION OF NEW IDEAS FOR SUCH MATERIAL

...CURRENT IMPORTANT PROGRAMS
DETECTION OF DRUGS
IMPROVED MOBILITY
EXPLOSIVES DETECTION
POSITION MARKING
SURVIVAL TECHNIQUES AND EQUIPMENT

...FUNCTIONS/EQUIPMENT/CAPABILITIES
THE USALWL PROVIDES RESEARCH AND DEVELOPMENT ASSISTANCE TO SOLUTION
OF FIELD PROBLEMS IN ALL THEATERS AND IN ALL CLIMATES AND GEOGRAPHIES.
THE LABORATORY CAPABILITY COVERS ALL MAJOR SCIENTIFIC AREAS. WITH 57
PROFESSIONAL PERSONNEL THE ORGANIZATION CONTAINS 7 SMALL WELL-EQUIPPED
WORKING LABS IN COMMUNICATIONS/ELECTRONICS, MUNITIONS, MOBILITY,
ENVIRONMENT AND SURVIVAL, APPLIED CHEMISTRY, APPLIED PHYSICS AND
BIOLOGICAL SCIENCES, FURTHER, THE LABORATORY HAS INHOUSE DESIGN AND
PROTOTYPE FABRICATION CAPABILITY IN METALS AND WOOD. THE ORGANIZATION
IS ASSIGNED AN EIGHTY ACRE TEST FACILITY FOR DEVELOPMENTAL TESTING OF
PERTINENT ITEMS AND IS LOCATED AT ABERDEEN PROVING GROUND, MARYLAND
WHERE MANY MAJOR TESTING FACILITIES ARE READILY AVAILABLE.

INSTALLATION LETTERMAN ARMY INST.OF RSCH. PRESIDIO OF SAN FRAN,CAL.

C.O. COL WILLIAM A. AKERS TECH. DIR. DR. JAMES R. NEVILLE

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.666 | 0.694 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 7.694 | 11.251 |
| TOTAL ANNUAL LAB | 8.360 | 11.945 |
| TOTAL INHOUSE | 8.360 | 11.945 |
| TOTAL INHOUSE RDT+E | 0.666 | 0.694 |
| ANNUAL OPERATING COST | 0.257 | 0.372 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 86 | 22 | 62 | | 24 |
| CIVILIAN | 19 | 3 | 9 | | 10 |
| TOTAL | 105 | 25 | 71 | | 34 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | | |
|-------|-------------------------------------|-------|-------|--------|-------------------|-----------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 0 | 60.102 | 8.900 | 0.000 | 69.002 | 0.052 | 2.552 | |

...MISSION

LAIR CONDUCTS RESEARCH IN THE FIELDS OF MEDICINE AND CHEMISTRY. GUIDES, COORDINATES, SUPPORTS RESEARCH PROJECTS OF STAFF MEMBERS OF LETTERMAN GENERAL HOSPITAL. SIMILARLY SUPPORTS RESEARCH IN HOSPITALS AT CLASS I INSTALLATIONS. MONITORS OTHER RESEARCH AS DIRECTED BY CG, USAMRDC.

...CURRENT IMPORTANT PROGRAMS

ASSAULTS AGAINST HUMAN SKIN -- WATER, HEAT, HUMIDITY, FRICTION, INSECTS, BACTERIA, FUNGI, ALONE AND IN COMBINATION. SURVEY OF MAXILLOFACIAL INJURIES. EARLY RESTORATION OF ORAL INTEGRITY. BONE REPAIR, BACTEREMIA. HEMORRHAGIC SHOCK. TEST COMPOUNDED RADIO-PHARMACEUTICALS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

LABORATORIES NOW EQUIPPED FOR BACTERIOLOGY (CUTANEOUS AND CRAL), BIOCHEMISTRY, BLOOD GAS ANALYSIS, CHROMATOGRAPHY, ENZYMOLOGY, HEMATOLOGY, HISTOLOGY, IMMUNOLOGY, MYCOLOGY, NUCLEAR PHARMACY, ANIMAL PHYSIOLOGY, AND ISOTOPIC SCANNING (ANIMAL AND HUMAN). 30 VOLUNTEERS ARE USED IN STUDIES OF DELAYED HYPERSENSITIVITY, FRICTION BLISTERS, FUNGAL SKIN INFECTIONS, MOSQUITO REPELLENTS, PROLONGED WARM WATER IMMERSION, AND PRICKLY HEAT RASH. ESTABLISHED A NEW BREEDING COLONY OF CHASES GUINEA PIGS FOR CUTANEOUS DELAYED HYPERSENSITIVITY. BONE GRAFTING, REPAIR, AND HEALING STUDIES, PHYSICAL METHODS, AND HISTOLOGY. RADIOIMMUNOASSAYS OF ANGIOTENSIN I AND II, AND RENIN DEVELOPED AND IN CLINICAL USE.

INSTALLATION MATERIALS AND MECHANICS RSCH CENTER WATERTOWN, MASS.

C.O. MAJ K.I. KAWANO DIR. DR. A.E. GORUM

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 12.847 | 11.361 |
| TOTAL PROCUREMENT | 1.825 | 2.095 |
| TOTAL O+M | 1.003 | 1.295 |
| TOTAL OTHER | 7.137 | 0.484 |
| TOTAL ANNUAL LAB | 22.812 | 15.235 |
| TOTAL INHOUSE | 9.717 | 9.333 |
| TOTAL INHOUSE RDT+E | 7.886 | 7.273 |
| ANNUAL OPERATING COST | 3.596 | 3.822 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 12 | 6 | 12 | | 0 |
| CIVILIAN | 610 | 61 | 214 | | 396 |
| TOTAL | 622 | 67 | 226 | | 396 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|--------------------|---------|---------|---------|-------------------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 48 | 410.100 | 122.400 | 129.000 | 661.500 | 14.212 | 13.208 |

...MISSION

MANAGE AMC R+D STRUCTURAL MATERIALS + MECHANICS PROG.CONDUCT TECHNOLOGICAL PROGRAMS IN MATERIALS + MECHANICS USED IN ARMY MATERIEL.EXECUTE PROG IN OWN FACILITIES + BY ASSIGNMENT + FUND TRANSFER TO OTHER AMC LABS + CONTRACTORS.PROVIDE DIRECTION + TECH ASST ON MATERIALS + MECHANICS.

...CURRENT IMPORTANT PROGRAMS

R+D PROGRAMS FOR IMPROVED MATERIAL - ARMOR
R+D PROGRAMS FOR IMPROVED MATERIAL - ABM HARDENING
R+D PROGRAMS FOR IMPROVED MATERIAL - AIRCRAFT
R+D PROGRAMS FOR IMPROVED MATERIAL - MATERIALS-PROCESSING + EVALUATION
R+D PROGRAMS FOR IMPROVED MATERIAL - AMMUNITION

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MANAGE AMC R+D PROG IN MATERIALS + MECHANICS + CONDUCT TECH PROGS IN MATERIALS SYSTEMS + MECHANICS DIRECTED TO ARMY MATERIEL.MANAGE DOD PROG AS EXECUTIVE AGENT-ARMOR TECHNOLOGY.MANAGE + CONDUCT INTEGRATED + DIRECTED BASIC + APPLIED RES ON MATERIALS SUCH AS METALS,CERAMICS,ORGANIC + IN-ORGANIC POLYMERS + COMPOSITES.MANAGE + CONDUCT THEORETICAL + APPLIED STUDIES ON MECHANICS OF MATLS + SYSTEMS.IDENTIFY + INVES BASIC FACTORS INVOLVED IN PROCESSING + APPLICATIONS OF NEW + IMPROVED MATERIALS. OPERATE DOD NDT INFO ANALYSIS CTR.ASSIST IN DESIGN + DEVEL OF PROTOTYPES.DEVELOP METHODS FOR TEST + EVALUATION OF MATERIALS + STRUCTURES.MANAGE ARMY PORTION DEFENSE STANDARDIZATION PROG.CONDUCT ENGINEERING STANDARDIZATION EFFORT.MANAGE AMC MATERIALS TEST PROG.CONDUCT PEMA MANUF METHOD + TECHNOLOGY PROG + ADVISE COMMAND + INDUSTRY ON PROCESSING TECHNIQUES.

INSTALLATION MEDICAL BIOMECHANICAL RES. LAB., W. REED AMC, WASH DC

C.O. LTC ORLYN C. OESTEREICH SCIENTIFIC DIR. DR. FRED LEONARD

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.637 | 0.662 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.113 | 0.104 |
| TOTAL ANNUAL LAB | 0.750 | 0.764 |
| TOTAL INHOUSE | 0.750 | 0.764 |
| TOTAL INHOUSE RDT+E | 0.637 | 0.662 |
| ANNUAL OPERATING COST | 0.060 | 0.045 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 17 | 3 | 13 | 4 |
| CIVILIAN | 30 | 4 | 14 | 16 |
| TOTAL | 47 | 7 | 27 | 20 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|-------|-------|--------|-------------------|-------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 0 | 11.463 | 1.022 | 0.000 | 12.485 | 0.930 | 0.380 |

...MISSION
TO CONDUCT FUNDAMENTAL AND APPLIED RESEARCH TO DEVELOP MATERIALS AND DEVICES FOR INTERNAL AND EXTERNAL BIOMECHANICAL APPLICATION AND THE FABRICATION OF PROTOTYPE DEVICES OF SPECIALIZED MILITARY NATURE OF MEDICAL INTEREST.

...CURRENT IMPORTANT PROGRAMS
SYNTHESIS AND CHARACTERIZATION OF SURGICAL REPAIR MATERIALS AND HEMOSTATIC AGENTS. VIABLE AND NECROTIC TISSUE DIFFERENTIATION. MINERALIZATION OF SKELETAL AND SOFT TISSUE AND MEANS OF ENHANCING THE RATE OF BONE HEALING. PROSTHETIC AND ORTHOTIC DEVICES FOR THE SEVERELY HANDICAPPED/TRAUMATIZED PATIENT.

...FUNCTIONS/EQUIPMENT/CAPABILITIES
USAMBRL HAS EQUIPMENT AND FACILITIES TO CARRY OUT ITS RESEARCH TO DEVELOP SURGICAL REPAIR MATERIALS, TO EFFECT HEMOSTASIS AND REPAIR OF TISSUES OR ORGANS, PROSTHETIC AND ORTHOTIC SYSTEMS, BIOMEDICAL DEVICES AND MAXILLOFACIAL PROSTHESES. THIS INCLUDES INSTRUMENTATION FOR LIGHT SCATTERING, CHROMATOGRAPHY, ULTRACENTRIFUGATION RADIOASSAYS, OPTICAL METHODS, DATA, SYNTHESIS, STEAM STERILIZATION, OVENS, BATHS, HISTOLOGY AND ELECTRON MICROSCOPY, CELL AND TISSUE CULTURE STUDIES, ANIMAL HOLDING FACILITY, EXPERIMENTAL SURGERY ROOM, ISOTOPE, METABOLIC, AUTORADIOGRAPHY, CELL ORGANELLE, RADIOLOGY, X-RAY STUDIES, MACHINE SHOP EQUIPPED WITH WELDING AND METAL WORKING MACHINES.

INSTALLATION MEDICAL EQUIP. R+D LAB., FT. TOTTEN, FLUSHING, N.Y.

C.O. COL ROBERT J. ROGERS TECH. DIR. AARON ISMACH

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.630 | 0.837 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.161 | 0.166 |
| TOTAL ANNUAL LAB | 0.791 | 1.003 |
| TOTAL INHOUSE | 0.791 | 1.003 |
| TOTAL INHOUSE RDT+E | 0.630 | 0.837 |
| ANNUAL OPERATING COST | 0.394 | 0.390 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 15 | 0 | 8 | | 7 |
| CIVILIAN | 39 | 0 | 8 | | 31 |
| TOTAL | 54 | 0 | 16 | | 38 |

| ACRES | SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET) | | | | COST (MILLION \$) | |
|-------|---|-------|--------|--------|-------------------|-------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 0 | 7.864 | 3.577 | 31.709 | 43.150 | 0.556 | 0.466 |

...MISSION

CONDUCTS ENGINEERING RESEARCH AND DEVELOPMENT LEADING TO PRODUCTION OF FIELD MILITARY MEDICAL EQUIPMENT FOR THE ARMY AND ON A REQUIRED BASIS FOR THE OTHER SERVICES.

...CURRENT IMPORTANT PROGRAMS

ARTHROPOD AND RODENT CONTROL EQUIPMENT. PULSED WATER PRESSURE DEVICE FOR CLEANING ANESTHESIA EQUIPMENT. FIELD DENTAL EQUIPMENT. HYPODERMIC INJECTION APPARATUS, VETERINARY MEDICINE, FIELD MEDICAL HUMAN BODY DIAGNOSTIC EXAMINATION AND RECORDING SYSTEM.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

THE LABORATORY OCCUPIES THREE BUILDINGS UTILIZING A TOTAL OF 11,200 SQUARE FEET FOR ADMINISTRATION, 5,000 FOR T+E, 13,127 FOR SHOP SPACE AND 14,151 FOR STORAGE. DATA DO NOT INCLUDE SUCH AREAS AS LABORATORIES, CORRIDORS, ETC. EQUIPMENT AND FACILITIES INCLUDE AN ELECTRICAL-ELECTRONICS BRANCH EQUIPPED WITH HAND METERS, OSCILLOSCOPES, GENERATORS, REGULATED POWER SOURCES AND RECORDERS, A PHYSICAL TESTING BRANCH EQUIPPED WITH AN INSTRON TESTING MACHINE, AND ENVIRONMENTAL CHAMBERS, A PROTOTYPE FABRICATION FACILITY EQUIPPED WITH LATHES, MILLING MACHINES, SURFACE GRINDERS, SHEARS, POWER BRAKE, POWER ROLLER, SPOT WELDERS, FOUNDRY, HELIARC AND GAS WELDING EQUIPMENT, HEATING, TREATING OVEN, PAINT OVEN, FABRIC SEWING MACHINES, PLASTIC FORMING EQUIPMENT, CARPENTRY AND PATTERN AND MODEL MAKING TOOLS.

INSTALLATION MED.RSCH OF INFECTIOUS DISEASES, FT. DETRICK, MD.

C.O. COL DAN CROZIER TECH. DIR. DR. WILLIAM R. BEISEL

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 3.904 | 4.080 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 1.673 | 1.681 |
| TOTAL ANNUAL LAB | 5.577 | 5.761 |
| TOTAL INHOUSE | 4.560 | 4.761 |
| TOTAL INHOUSE RDT+E | 2.887 | 3.280 |
| ANNUAL OPERATING COST | 0.910 | 1.349 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 344 | 38 | 41 | 303 |
| CIVILIAN | 96 | 9 | 20 | 76 |
| TOTAL | 440 | 47 | 61 | 379 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|--------|---------|---------|-------------------|-------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 0 | 71.728 | 13.238 | 105.994 | 190.960 | 8.284 | 1.823 |

...MISSION

DEVELOP INFORMATION AND MEANS FOR PROVIDING MEDICAL DEFENSE AGAINST BIOLOGICAL WEAPONS ATTACK. ASSESS HAZARD TO U.S. ARMED FORCES, STUDY PATHOGENESIS OF INFECTIONS OF MILITARY IMPORTANCE, DEVELOP PROPHYLACTIC AND THERAPEUTIC MEASURES, INVESTIGATE APPLICABLE DIAGNOSTIC PROCEDURES.

...CURRENT IMPORTANT PROGRAMS

STUDY OF PATHOGENESIS OF INFECTIONS OF MILITARY IMPORTANCE. DEVELOPMENT OF NEW DIAGNOSTIC AND THERAPEUTIC METHODS FOR INFECTIOUS AND TOXIC DISEASES. VACCINE DEVELOPMENT, ESPECIALLY VACCINES AGAINST ARBOVIRUS AND RICKETTSIAL DISEASES AND STAPHYLOCCAL ENTEROTOXEMIAS. DEVELOPMENT OF VACCINE COMBINATIONS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

NEW BUILDING, WHEN FULLY OPERATIONAL, WILL CONTAIN 17 SUITES FOR STUDY OF MICROORGANISMS, INCLUDING HIGHLY INFECTIOUS ORGANISMS, FACILITIES FOR ACUTE AND CHRONIC STUDIES, AEROSOL EXPOSURE FACILITIES, MULTIDISCIPLINE-ORIENTED SUPPORT LABORATORIES FOR IMMUNOLOGY, PATHOLOGY, PHYSIOLOGY, BIOCHEMISTRY, BIOPHYSICS, MOLECULAR BIOLOGY AND TISSUE CULTURE, AND HOSPITAL FACILITIES FOR GENERAL MEDICINE AND RESEARCH STUDIES UTILIZING VOLUNTEERS. THE LARGE VOLUNTEER PROGRAM IS ON-GOING, MEN ARE USED FOR VACCINE EVALUATION AND TESTING OF DIAGNOSTIC AND THERAPEUTIC PROCEDURES. CAPABILITIES ALSO EXIST FOR STUDY OF LARGE ANIMALS, PRIMATES AND CUSTOMARY LABORATORY ANIMALS.

INSTALLATION MED. RES. AND NUTR. LAB., FITZSIMONS GH, DENVER, COLO.

C.O. COL JOHN E. CANHAM

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 2.276 | 2.281 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 1.140 | 1.118 |
| TOTAL ANNUAL LAB | 3.416 | 3.399 |
| TOTAL INHOUSE | 3.416 | 3.399 |
| TOTAL INHOUSE RDT+E | 2.276 | 2.281 |
| ANNUAL OPERATING COST | 0.558 | 0.547 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 113 | 30 | 76 | 37 |
| CIVILIAN | 98 | 12 | 46 | 52 |
| TOTAL | 211 | 42 | 122 | 89 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|-------|--------|---------|-------------------|-------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 0 | 83.663 | 5.138 | 19.087 | 107.888 | 4.791 | 3.938 |

...MISSION

DETERMINE ADEQUACY OF TROOPS DIET IN ALL ENVIRONMENTS AND RECOMMEND NUTRITIONAL MEASURES FOR OPTIMUM PERFORMANCE. CONDUCT RESEARCH ON MEDICAL, SURGICAL AND NUTRITIONAL PROBLEMS, COMPUTER TECHNIQUES IN BIO-MEDICAL AREAS, FOOD HYGIENE, PHYSIOLOGY OF EXERCISE AND FAT.

...CURRENT IMPORTANT PROGRAMS

FACTORS INFLUENCING WORK PERFORMANCE, FATIGUE AND MUSCLE PHYSIO-BIOCHEM IN MAN AND MILITARY DOG. INFLUENCE OF STRESS ON NUTRIENT REQUIREMENTS. MULTIPLE PHYSIO, BIOCHEM AND PATHOLOGICAL ENVIRONMENTAL STUDIES ON EFFECTS OF HIGH TERRESTRIAL ALTITUDE. IDENTIFY CAUSE OF CHRONIC GI PROBLEM. FACTORS INFLUENCING IMMUNITY TO TB.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

HUMAN METABOLIC WARD WITH TEMP AND HUMID CONTROL RM, GERM-FREE ANIMALS, ACOUSTIC PHYSIO PERF, ELECTRON MICROSCOPY, HIGH ALT LAB (PIKES PEAK), ENVIRON TEST CHAMBER, RCA 301-355 ADPS, AUTO ANALYZERS AND RECORDERS INCLUDING AUTO BETA AND GAMMA COUNTERS, SHADOW SHIELD WHOLE BODY COUNTER, AND MASS SPECTROMETER. RSCH INCLUDE- NUTR SURVEYS AND RATION TESTING, RSCH ON MICROBIAL AGENTS CAUSING RESP DISEASE, BIOMED CMPT RSCH, INFLUENCE OF HIGH TERRESTRIAL ALT ON PHYSIO-PSYCHO PERF, BODY COMPOSITION, METABOLISM AND MODIFYING FACTORS, BASIC AND APPLIED STUDIES OF TRACE MINERAL METABOLISM, NUTRIENT RQR AND INTERRELATIONSHIP, METABOLIC RESPONSE OF MAN TO NUTR AND DISEASE, EXPER SURG, COMPARATIVE PATHOLOGY OF STRESS IN ENVIRON AND NUTR, PHYSIO AND BIOCHEM STUDIES OF MUSCLE METABOLISM, EXER AND FATIGUE.

INSTALLATION MEDICAL RES. LAB. FT. KNOX, KY.

C.O. COL NICHOLAS F. CONTE

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 1.854 | 1.831 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.553 | 0.591 |
| TOTAL OTHER | 0.760 | 0.807 |
| TOTAL ANNUAL LAB | 3.167 | 3.229 |
| | | |
| TOTAL INHOUSE | 3.167 | 3.229 |
| TOTAL INHOUSE RDT+E | 1.854 | 1.831 |
| ANNUAL OPERATING COST | 0.611 | 0.670 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 97 | 14 | 70 | 27 |
| CIVILIAN | 110 | 16 | 31 | 79 |
| TOTAL | 207 | 30 | 101 | 106 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|-------|--------|---------|-------------------|-------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 19 | 86.786 | 5.368 | 26.700 | 118.854 | 0.938 | 3.402 |

...MISSION

RESEARCH IN SENSORY PHYSIOLOGY, BIOLOGICAL EFFECTS OF COHERENT LIGHT, PHYSIOLOGICAL EFFECTS OF WEAPONS, MECHANICAL AND PHYSICAL SYSTEMS, RESEARCH AND TRAINING IN BLOOD COLLECTION, PROCESSING, PRESERVATION AND TRANSFUSION, OPERATION OF BLOOD DONOR CENTER AND BLOOD BANK FELLOWSHIPS.

...CURRENT IMPORTANT PROGRAMS

SENSORY PSYCHOPHYSIOLOGY - VISION, AUDITION AND WORK PERFORMANCE.
BIOLOGICAL EFFECTS OF LASER RADIATION.
METHODOLOGY RELATED TO COLLECTION, PROCESSING, PRESERVATION, SHIPMENT, AND TRANSFUSION OF HUMAN BLOOD.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

EQUIPMENT FACILITIES OF THE MEDICAL RESEARCH LABORATORIES INCLUDE RUBY, CO2, KRYPTON, ARGON LASERS AND ELECTRON MICROSCOPE. FACILITIES CAPABILITIES INCLUDE AN ANECHOIC CHAMBER FOR STUDIES INVOLVING SOUND. ADDITIONALLY, THIS UNIT HAS FUNCTIONAL CAPABILITIES IN THE AREAS OF BIOPHYSICS, HEMATOLOGY, ERGONOMICS, BLOOD COLLECTION AND PROCESSING, PSYCHOPHYSIOLOGY AND BIOCHEMISTRY.

INSTALLATION MEDICAL RESEARCH UNIT, BALBOA HEIGHTS, CANAL ZONE

C.O. LTC JAMES C. BURKE

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.163 | 0.175 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.118 | 0.121 |
| TOTAL ANNUAL LAB | 0.281 | 0.296 |
| TOTAL INHOUSE | 0.281 | 0.296 |
| TOTAL INHOUSE RDT+E | 0.163 | 0.175 |
| ANNUAL OPERATING COST | 0.080 | 0.090 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 9 | 2 | 5 | | 4 |
| CIVILIAN | 8 | 0 | 0 | | 8 |
| TOTAL | 17 | 2 | 5 | | 12 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------------------|-------|-------|-------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| 0 | LAB | ADMIN | OTHER | TOTAL | 0.000 | 0.061 |
| | 5.000 | 0.600 | 0.000 | 5.600 | | |

...MISSION
IN CONJUNCTION WITH OTHER U.S. GOVERNMENT AGENCIES, CONDUCTS RESEARCH ON MEDICAL AND ENVIRONMENTAL PROBLEMS OF MILITARY IMPORTANCE IN CENTRAL AMERICA, SOUTH AMERICA AND PANAMA.

...CURRENT IMPORTANT PROGRAMS
PREVALENCE + DISTRIBUTION OF PARASITIC DISEASE IN LATIN AMERICA.
PATHOGENESIS OF PARASITIC INFECTIONS.
BIONOMICS OF PHLEBOTOMUS FLIES.
EPIDEMIOLOGY + IMMUNOLOGY OF TROPICAL VIRUSES.

...FUNCTIONS/EQUIPMENT/CAPABILITIES
DIRECT + INDIRECT ISOLATION AND IDENTIFICATION OF PARASITIC ORGANISMS + THEIR VECTORS IN CENTRAL AND SOUTH AMERICA. LABORATORY SPACE ADEQUATE FOR THE SCIENTIFIC DISCIPLINE OF ENTOMOLOGY, PARASITOLOGY, PATHOLOGY AND VIROLOGY. SPECIAL EQUIPMENT AND FACILITIES TO SUPPORT THESE DISCIPLINES INCLUDE -- FLUORESCENT MICROSCOPE, AUTO-TECHNICON, CRYOSTOT, PHOTO-MICROGRAPHY, LABORATORY ANIMAL QUARTERS, TISSUE CULTURE LINES, LIQUID NITROGEN PLANT AND ACCESS TO DATA-PROCESSING SERVICE.

INSTALLATION MEDICAL RES. UNIT, KUALA LUMPUR, MALAYSIA

C.O. COL FRANCIS C. CADIGAN, JR.

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.182 | 0.182 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.059 | 0.063 |
| TOTAL ANNUAL LAB | 0.241 | 0.243 |
| TOTAL INHOUSE | 0.241 | 0.243 |
| TOTAL INHOUSE RDT+E | 0.182 | 0.182 |
| ANNUAL OPERATING COST | 0.000 | 0.000 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 6 | 5 | 7 | | 0 |
| CIVILIAN | 0 | 0 | 0 | | 0 |
| TOTAL | 6 | 5 | 7 | | 0 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-----------------------|-------|-------|-------|-------------------|-------|
| | SPACE (THOUSANDS LAB) | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 0 | 7.000 | 0.900 | 0.000 | 7.900 | 0.100 | 0.222 |

...MISSION
TO STUDY INFECTIOUS DISEASES OF POTENTIAL MILITARY IMPORTANCE IN EQUATORIAL ASIA.

...CURRENT IMPORTANT PROGRAMS
STUDY SCRUB TYPHUS TRANSMISSION IN VIRGIN FORESTS.
EVALUATE SUB-HUMAN PRIMATES FOR HUMAN MALARIA HOSTS.
DETERMINE TRANSOVARIAL TRANSMISSION RATE OF RICKETTSIA.
STUDY DIARRHEA IN ABORIGINAL FOREST DWELLERS.
TO FIND A DRUG OR NATURAL FACTOR WHICH BLOCKS ENDOTOXIC FEVER AND SHOCK.

...FUNCTIONS/EQUIPMENT/CAPABILITIES
CONTINUE RESEARCH EFFORTS ALONG PRESENT LINES WITHIN THE SCOPE OF RESEARCH ACTIVITIES, TO PROVIDE DIAGNOSTIC LABORATORY CONSULTATION FOR MALAYSIAN CIVILIAN AND MILITARY MEDICAL SERVICES AND FOR COMMONWEALTH MILITARY MEDICAL SERVICES.
LABORATORY SPACE AND ANIMAL-REARING FACILITIES ARE PROVIDED BY THE INSTITUTE FOR MEDICAL RESEARCH, KUALA LUMPUR, MALAYSIA

INSTALLATION MISSILE COMMAND R+D LABS., REDSTONE ARSENAL, ALA.

C.O. MAJ GEN EDWIN I. DONLEY DIR. DR. JOHN L. MC DANIEL

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 71.635 | 64.148 |
| TOTAL PROCUREMENT | 6.087 | 3.754 |
| TOTAL O+M | 0.438 | 4.807 |
| TOTAL OTHER | 0.578 | 0.574 |
| TOTAL ANNUAL LAB | 78.738 | 73.283 |
| TOTAL INHOUSE | 41.991 | 31.044 |
| TOTAL INHOUSE RDT+E | 35.251 | 22.979 |
| ANNUAL OPERATING COST | 11.849 | 13.649 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 60 | 2 | 75 | 0 |
| CIVILIAN | 1067 | 49 | 652 | 415 |
| TOTAL | 1127 | 51 | 727 | 415 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|---------|--------|----------|-------------------|--------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 11000 | 898.760 | 140.606 | 71.250 | 1110.616 | 25.823 | 25.891 |

...MISSION

PLAN AND DIRECT MATERIEL DEVELOPMENT PROGRAMS + PROJECTS NOT SELECTED FOR PROJECT OR COMMODITY MGT. MANAGE BASIC + APPLIED RESEARCH PROJECTS. INIT + PERFORM RES + COMPONENT DEV TO GENERATE NEW TECHNOLOGY + PERFORM FEASIBILITY + DESIGN STUDIES FOR FUTURE WEAPON SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

CANNON LAUNCHED GUIDED PROJECTILE
LASER GUIDED HONEST JOHN
ADVANCED LASER DEVELOPMENT
TERMINALLY GUIDED SUBMISSILES
MISSILE TECHNOLOGY - EQUIPMENT SYSTEMS DEMONSTRATIONS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PERFORM LONG-RANGE TECH PLANNING. DESIGN, DEV, + FABRICATE PROTOTYPE MSL SYS. TECH EVAL + SUPV OF CONTR PROPOSALS + EFFORTS. PLAN + CONDUCT ENGR DESIGN TESTS. OPERATE AIGHT CTR + ARPT+M CTR. PLAN + DIRECT DEVELOPMENT OF TEST EQUIP FOR SYS INSTALL + TEST REQUIREMENTS
GUIDANCE + CONTROL CLEAN-ROOM COMPLEX, SIMUL FAC CONSISTING OFRF SHIELD ED ANECHOIC CHAMBER, INFRARED SYS SIMUL + ELECTRO-OPTICAL SYS SIMULATOR, DUAL-POSITION TEST STD, 8000-KW JET FAC HIGH-VELOCITY, 2-MEV VAN DE GRAA FF, HI-ENERGY LASER FAC, DYNAMIC MODULES TESTERS, X-RAY DIFFRACTOMETER + SPECTROGRAPH, PROPELLANT EVAL FAC, 13 ANALOG + 4 DIGITAL COMPUTERS. MC MORROW LABS - SEIO, AERO, ADV SEN, G+C, + GEN DIR 359000 SQ FT SPACE + \$17M EQUIP. T+E DIR OCCUPIES 13000 ACRES W/FACIL + CAPABIL F/ FLT, TRACK, + STATIC TESTING FAC, SYS ENVIRON, COMP TEST EQUIP + ANALYTICAL SERVICES.

INSTALLATION MOBILITY EQUIP. RES. AND DEVELOP. CENTER, FT BELVOIR,

C.O. COL BENNETT L. LEWIS TECH. DIR. WILLIAM B. TAYLOR

PROGRAM DATA BY FISCAL YEAR (MILLION \$)

| PROGRAM | 1971 (ACTUAL) | 1972 (ACT + EST) |
|-----------------------|------------------|---------------------|
| TOTAL RDT+E | 33.741 | 37.347 |
| TOTAL PROCUREMENT | 11.046 | 20.551 |
| TOTAL O+M | 7.228 | 7.284 |
| TOTAL OTHER | 0.753 | 0.550 |
| TOTAL ANNUAL LAB | 52.768 | 65.732 |
| TOTAL INHOUSE | 25.195 | 24.034 |
| TOTAL INHOUSE RDT+E | 15.915 | 16.500 |
| ANNUAL OPERATING COST | 6.149 | 6.200 |

PERSONNEL DATA (END OF FY 1971)

| PERSONNEL | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
|-----------|------------------------|----------------|---------------|--------------|
| MILITARY | 54 | 1 | 44 | 10 |
| CIVILIAN | 1306 | 9 | 390 | 916 |
| TOTAL | 1360 | 10 | 434 | 926 |

SPACE AND PROPERTY

| ACRES | SPACE (THOUSANDS OF SQUARE FEET) | | | | COST (MILLION \$) | |
|-------|----------------------------------|---------|---------|---------|-------------------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 1060 | 285.697 | 217.336 | 357.645 | 860.678 | 23.197 | 29.602 |

...MISSION

BASIC AND APP RSCH DEV AND ENGR TEST ON ASGND EQUIP (RAIL MARINE AMPHIB
BDG ASLT STREAM CROSSING ELEC PWR GEN INDUS ENGS CONST FIREFTG PREFABS
HTG AC WASTE DISPOSAL WATER PURIF CAMOU MINE WARFARE BARR-CTRBARR FUELS
HDL MHE DEMLS PHYS SEC) ENGR SPT TO MSC QUAN PROC AND MAINT ACTIVITIES.

...CURRENT IMPORTANT PROGRAMS

EARTHMOVING FAMILY OF ENGR CONSTRUCTION EQUIPMENT (FAMECE)
ELEC PWR GEN INCL LIQ FUEL CELLS ENCLD RANKING CYC PLTS-TURBOALTERNATRS
MINE NEUTRALIZATION MINE DETECTION COUNTERMINES SYSTEMS
SENSORS AND DETECTORS FOR COUNTERINTRUSION SYSTEMS
LIGHTWEIGHT FLOATING BRIDGE (RIBBON BRIDGE)

...FUNCTIONS/EQUIPMENT/CAPABILITIES

OFFICES AND LABORATORIES WITH SUPPORTING DATA PROCESSING ENGINEERING
AND INSTRUMENTATION SVCS SHOPS TEST COURSES AND TEST LANES. EQUIPMENT
AND CAPABILITIES INCLUDE FUEL CELL AND POWER PLANT LABS AC AND HTG LAB
ANACHOIC MICROWAVE SCATTERING FACILITY. ECHO FREE ANACHOIC CHAMBER FOR
ACOUSTIC HOMING STUDIES. ENERGY CONVERSION RESEARCH FACILITY, HIGH
PRESSURE AIR COMPRESSORS. HYDRAULICALLY ACTUATED TEST FRAME FOR BRIDGES
SHOCK TEST TUBE SIMULATING HIGH EXPLOSIVE BLAST EFFECTS, POWER SYSTEMS
SIMULATOR, OUTDOOR RAIN TEST SITE, FULL SCALE RAILCAR HUMP TEST FACILITY
AND LARGE AND SMALL TROPICAL TEMPERATURE AND HUMIDITY TEST CHAMBERS

INSTALLATION NATICK LABS., NATICK, MASS

C.O. COL WILLIAM LEVIN SCIENCE DIR. DR. DALE H. SIELING

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 16.056 | 21.583 |
| TOTAL PROCUREMENT | 1.303 | 0.838 |
| TOTAL O+M | 9.898 | 8.721 |
| TOTAL OTHER | 1.365 | 1.527 |
| TOTAL ANNUAL LAB | 28.622 | 32.669 |
| TOTAL INHOUSE | 23.511 | 25.482 |
| TOTAL INHOUSE RDT+E | 12.585 | 15.331 |
| ANNUAL OPERATING COST | 5.311 | 5.150 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PRCF |
| MILITARY | 150 | 10 | 72 | 78 |
| CIVILIAN | 1242 | 95 | 487 | 755 |
| TOTAL | 1392 | 105 | 559 | 833 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|--------------------|--------|---------|---------|-------------------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 3087 | 525.000 | 65.900 | 274.600 | 865.500 | 39.024 | 12.458 |

...MISSION

ACCOM ASG R-D IN THE PHYS AND BIOL SCI AND ENG TO MEET MIL RQR IN THE COMMODITY AREAS OF TEX CLO BODY ARMOR ORG MATLS INSECT AND FUNG SUBS CNTRS FOOD SVC EQUIP FLD SPT EQUIP TENT AND EQUIP AND AIR DEL EQUIP. IN DESIG CMDTY AREAS PROV TECH AND ENG SPT IN CONNEX W/ACCOM CF AE AND STD.

...CURRENT IMPORTANT PROGRAMS

FOOD SERVICE SYSTEM FOR THE ARMY IN THE FIELD
L' ALTITUDE AIRDROP SYS FOR PERS SUPPL AND EQUIP
RELIABILITY OF FLEXIBLE PACKAGING FOR FOOD
PERSONNEL ARMOR PROGRAM
POLLUTION ABATE BY ENZY CONV OF CELLULOSIC MATLS TO FOOD-CLEAN BURN FUEL

...FUNCTIONS/EQUIPMENT/CAPABILITIES

COBALT 60 IRRAD FACILITY DESIGNED FOR MAX FLEXIBILITY IN FOOD PROCESSING
BACTERIOLOGY LAB EQUIP FOR INVESTIGATIONS OF PATHOGENIC MICROORGANISMS
FLAME PROTECTION LAB AND FACILITY INCLUDING AN OUTDOOR FLAME PIT
HIGH RESOLUTION MASS SPECTROMETER FOR ANALYSIS OF VOLATILE COMPOUNDS
FOOD PROCESSING FAC FOR CONTROLLED PREPROCESSING AND PROC BY SEV TECHNIQ
LAB SUBSONIC WIND TUNNEL CAPABLE OF VELOCITIES UP TO 110 FEET PER SEC
HEAT TRANSFER LAB TO STUDY HEAT AND MASS TRANSPORT CHAR OF FABRICS
ELECTRON LINEAR ACCELERATOR DESIGNED FOR HIGH POWER OUTPUT IN FOOD PROV
DROP TEST FAC CONS OF 40 TON CAPACITY TRACKED CRANE AND A 50 FT BOOM
DYEING AND FINISHING LAB FOR CONDUCTING STUDIES OF TEXTILES
FEBETRON MACHINE USED AS A RADIA SOURCE FOR PULSE RADIOLYSIS STUDIES
RAIN ROOM DESIGNED TO DUPLICATE RAINFALL CORRESPONDING TO NATURAL RAIN

INSTALLATION NIGHT VISION LABORATORY, FORT BELVOIR, VA.

DIR. BENJAMIN GOLDBERG

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 30.090 | 29.802 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.000 | 0.000 |
| TOTAL ANNUAL LAB | 30.090 | 29.802 |
| TOTAL INHOUSE | 16.542 | 15.438 |
| TOTAL INHOUSE RDT+E | 16.542 | 15.438 |
| ANNUAL OPERATING COST | 2.603 | 3.129 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 30 | 0 | 15 | | 15 |
| CIVILIAN | 423 | 33 | 220 | | 203 |
| TOTAL | 453 | 33 | 235 | | 218 |

| ACRES | SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET) | | | | COST (MILLION \$) | |
|-------|--|--------|--------|---------|-------------------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 0 | 73.625 | 29.883 | 67.131 | 170.639 | 4.295 | 36.200 |

...MISSION

SERVES AS AMC LEAD LABORATORY AND AMC TECHNOLOGY CENTER FOR RESEARCH + DEVELOPMENT OF NIGHT VISION SYSTEMS. TECHNOLOGIES OF NIGHT VISION INCLUDE, BUT ARE NOT LIMITED TO, BATTLEFIELD ILLUMINATION, NEAR INFRARED, FAR INFRARED, IMAGE INTENSIFICATION, TV AND THIN FILMS.

...CURRENT IMPORTANT PROGRAMS

NIGHT VISION SYSTEMS FOR ARMY AIRCRAFT AND COMBAT VEHICLES
 NIGHT VISION SYSTEMS FOR MISSILES AND WEAPON SYSTEMS
 RES ON PHOTOCATHODES OFFERING TENFOLD IMPR IN NV DEVICE PERFORMANCE
 ESTAB VISIONICS TECHNOLOGY FOR OBJ ANALYSIS AND SYNTHESIS OF NV SYSTEMS
 RES ON NON-SCANNING DIRECT CONVERSION THERMAL IMAGING DEVICES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

EXTENSIVE TEST FACILITIES AND EQUIPMENT FOR THE SPECIFIC OPTICS, ELECTRON OPTICS, CERAMICS, REFRACTORIES AND GLASS, ELECTRONIC AND ELECTRICAL ENGINEERING COMPONENTS PECULIAR TO NV TECHNOLOGY. FACILITIES FOR RESEARCH, TEST AND EVALUATION OF SOLID STATE PHYSICS SUCH AS INFRARED AND ULTRAVIOLET DETECTION, OPTICAL DETECTION, PLASMA PHYSICS, MASERS + LASERS, CRYSTALLOGRAPHY, ORGANIC CHEMISTRY, THERMO-DYNAMICS + ATMOSPHERIC PHYSICS, SPECIFICALLY APPLICABLE TO THE VARIOUS NV TECHNOLOGIES. FACILITIES FOR IMAGE INTENSIFIER OPTICS, POWER SUPPLIES, FAR INFRARED SYSTEMS DEVELOPMENT, FIR DETECTION AND IMAGING CAPABILITY, BOTH GROUND + AIRBORNE. FACILITIES FOR IMAGE SIMULATION, VISUAL PERCEPTION EVALUATION, SEARCH AND TARGET RECOGNITION. NIGHT VISION FIELD TEST EQUIPMENT FACILITY WITH CONTROLLED BACKGROUND.

INSTALLATION PICATINNY ARSENAL LABS., DOVER, N.J.

C.O. COL G.M. MONTGOMERY TECH. DIR. H.W. PAINTER

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 75.600 | 84.901 |
| TOTAL PROCUREMENT | 29.000 | 23.000 |
| TOTAL O+M | 5.400 | 6.600 |
| TOTAL OTHER | 0.000 | 0.000 |
| TOTAL ANNUAL LAB | 110.000 | 114.501 |
| TOTAL INHOUSE | 86.215 | 88.014 |
| TOTAL INHOUSE RDT+E | 51.815 | 58.414 |
| ANNUAL OPERATING COST | 4.517 | 5.500 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 68 | 2 | 59 | | 9 |
| CIVILIAN | 2575 | 62 | 1775 | | 800 |
| TOTAL | 2643 | 64 | 1834 | | 809 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|---------|----------|----------|-------------------|--------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 6495 | 594.642 | 668.245 | 2580.998 | 3843.885 | 72.150 | 50.500 |

...MISSION

CEN FOR LIFE CYCLE FUNC FR BASIC AND APPLIED RSCH THRU DEVMT AND ENGRG OF NUC AND CONVL MUNS SUCH AS MINES, GRENS, RKT AND MSL WHCS, PROJS, FUZES, EXPLOS, PYRO, PROP, MATS, PHYS AND ENGRG SCIENCE, DIGITAL ANALOG CMPTG. PROCS ALL NUC AND ASG CONVL MUNS. OPS ARMY EODC, DOD PLASTEC

...CURRENT IMPORTANT PROGRAMS

MINE SYSTEMS DEVELOPMENT
EXPLOSIVES AND PYROTECHNICS RESEARCH
PROJECTILE XM517
PROJECTILE 8 INCH RA HE XM650
SAFEGUARD WARHEAD SECTIONS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

NUC WPNS, PROTOTYPE FAB AND ASSY, AND EXPLOS AND PROP PLT PLANTS PROV COMPL INTRGED FAC FOR ASSY, INSP AND TEST OF AK AND CONVL MUNS AND COMPS AND THE MFG AND PROCING OF X EXPLOS AND PROP COMP. THE EXPLOS, PYRO, PROP, MATLS AND QA LABS HAVE UNUSUAL EQUIP FOR RSCH, RELIABILITY AND QA SUCH AS BETATRON, DYNAMITRON, HIGH SPEED PHOTO AND SHCCK LCAD FAC, HIGH ALT TEST CHAMBERS, ELECTROMAGNETIC RADIATION INSP ETC. THE DEVMT AND ENVIRONMENTAL TEST AND EVAL FAC HAVE MAJOR CPBLTY AS STATIC AND DYNAMIC TEST RGS, DROP TOWERS, DUD RECOVY AND DISASSEMBLY, RF VULNERABILITY, COMPL ENVIRONMENTAL SIM, TARGET EFFS ETC. OTHER EQUIP INCL VIBRATORS FOR LOADS TO 2000 LB, STATIC RKT TEST RG, 2540 TON HYDROSTATIC PRESS, CMPT TAPE CON MFG EQUIP, VARIETY OF FUZE EVAL EQUIP, CLOSED CIRCUIT TV, HIGH ACCEL SLED TRACK.

INSTALLATION RES. INST. OF ENVIRONMENTAL MEDICINE, NATICK, MASS.
C.O. COL LEEROY G. JONES TECH. DIR. DR. DAVID E. BASS

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 2.503 | 2.676 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.736 | 0.749 |
| TOTAL ANNUAL LAB | 3.239 | 3.425 |
| TOTAL INHOUSE | 3.239 | 3.425 |
| TOTAL INHOUSE RDT+E | 2.503 | 2.676 |
| ANNUAL OPERATING COST | 1.119 | 1.150 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 84 | 24 | 61 | | 23 |
| CIVILIAN | 104 | 21 | 50 | | 54 |
| TOTAL | 188 | 45 | 111 | | 77 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|--------------------|--------|--------|---------|-------------------|-------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 0 | 70.157 | 12.356 | 31.167 | 113.680 | 6.902 | 1.952 |

...MISSION
TO CONDUCT BASIC AND APPLIED RESEARCH TO DETERMINE HOW HEAT, COLD, HIGH TERRESTRIAL ELEVATION AND WORK AFFECT THE SOLDIERS LIFE PROCESSES, PERFORMANCE AND HEALTH, AND REPORT AND ADVISE THE ARMY AND THE SCIENTIFIC COMMUNITY.

...CURRENT IMPORTANT PROGRAMS
PREVENTION AND TREATMENT OF DISABILITIES DUE TO MILITARY OPERATIONS IN THE HEAT, COLD, AND ALTITUDES. PREDICTION OF LIMITS OF MILITARY PERFORMANCE AS A FUNCTION OF ENVIRONMENT, CLOTHING AND EQUIPMENT. MEDICAL PROBLEMS IN MILITARY ARCTIC OPERATIONS. BIOLOGICAL PROCESSES THAT LIMIT HEAVY PHYSICAL WORK.

...FUNCTIONS/EQUIPMENT/CAPABILITIES
CONDUCT RESEARCH AND PROVIDE GUIDANCE TO DESIGNERS, ENGINEERS, TACTICIANS, PLANNERS AND PHYSICIANS ON MILITARY PERFORMANCE AND CASUALTY PREVENTION AND TREATMENT IN EXTREME CLIMATES AND ENGINEERED ENVIRONMENTS, ADVISE ON HEALTH AND SAFETY IN MANEUVERS DURING HEAT, COLD OR HYPOXIC STRESS, TREAT COLD CASUALTIES AT BASSETT ARMY HOSP., ALASKA. IN HUMAN AND ANIMAL RESEARCH, USE APPROXIMATELY 50 VOLUNTEER TEST SUBJECTS AND EXTENSIVE CLIMATIC CHAMBERS OF NLABS PLUS MANY INTRINSIC SMALLER CHAMBERS, EXTENSIVE ANIMAL CARE FACILITIES, ELECTRON MICROSCOPE, UNDERWATER RESEARCH POOL, COPPER MANIKINS, AND DIVERSE EQUIPMENT FOR BIOCHEMICAL, BIOPHYSICAL, MEDICAL, PHYSIOLOGICAL, PHARMACOLOGICAL, AND PSYCHOLOGICAL MEASUREMENT.

INSTALLATION ROCK ISLAND ARSENAL LABS., ROCK ISLAND, ILL

C.O. MAJ GEN H.A. RASMUSSEN CHIEF SCIENTIST DR. C.M. HUDSON

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 15.394 | 13.489 |
| TOTAL PROCUREMENT | 0.990 | 0.291 |
| TOTAL O+M | 5.651 | 5.648 |
| TOTAL OTHER | 0.164 | 0.115 |
| TOTAL ANNUAL LAB | 22.199 | 19.463 |
| TOTAL INHOUSE | 14.216 | 14.555 |
| TOTAL INHOUSE RDT+E | 8.416 | 9.002 |
| ANNUAL OPERATING COST | 5.429 | 6.050 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 15 | 1 | 13 | | 2 |
| CIVILIAN | 787 | 36 | 320 | | 467 |
| TOTAL | 802 | 37 | 333 | | 469 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|--------------------|--------|---------|---------|-------------------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 18 | 95.600 | 91.020 | 204.754 | 391.374 | 1.466 | 10.259 |

...MISSION

ACFT WPN SYS, ARTY + INF WPNS, CREW SERVED WPNS MTD ON ANY TYPE VEH, + INF + CONVL ARTY LNCH DVC FOR BOTH CONVL SHL + H CAP BST RKT ARTY SHL, EXCL FREE RKT, GM, BAL MSL, TGT MSL + RELATED LANH + GSE. CLIPS LK + MAG FLR FOR CONVL AMMO, TK, SP ARTY + ASGD SPV/TRT, CUPCLA, RCL + MT, ELEV + TRAV MECH.

...CURRENT IMPORTANT PROGRAMS

1 GUN AIR DEFENSE EFFECTIVENESS STUDY GADES 2 SOFT RECCIL XM204
3 SIMULATION TO DETERMINE DYNAMIC RESPONSE OF WEAPONS TO VARIED CONDITIONS OF MOUNTING AND/OR LUBRICANT 4 SQUAD AUTOMATIC WEAPONS
5 MATH MODELING OF ARMORED WEAPON SYSTEMS UNDER DYNAMIC CONDITIONS, TO SIMULATE MID-INTENSITY COMBAT DYN TACS + PREDICT HIT PROBABILITY

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FAC CAPABILITIES ORNG FAC PERMIT FIRING ARTY WPN OF 105MM SIZE OR SMALLER USING INRT PJCTL AT 0 DEGREES EL IN/O PRF BUTT AT 100 YDS DIST. WPN FIR AT EL USING DISINTEGRATING PJCTL LOADED W/WET SAND. RNG BLDG HSG INDOOR RNG. 2 ARE 100 MTR. 1 CLIMATIC CHMBR RNG 1000 IN W/CONT HMD TEMP OF -90 DEGREE F/ 200 DEGREE F. 1 1000 IN WPN MT SIM RNG. ANY SA WPN THRU 40MM CAN BE FIRED. LATTER RNG 25 W 20 H PERMITS FIRING FROM TK CR HLCPTR. ACCESS TO IBM 360/65 COMPUTATION CENTER. PROTOTYPE SHOP IN SUPPORT OF RTE.
MAJOR EQUIP ILLUSTROMAT 1200 CMPTR GRPHS MT INSTM SYS VAR FLEXIBILITY GUN MT PROTOTYPE HIGH-SPEED SCNG IR RADIOMETER SYS HOLOGRAPHIC SYS VAR ANGLE HLCPTR MT ALPHA LUBT TESTER MODEL LFW3 MOTION TABLE FOR SMALL TURRET STBLN TESTING HYDR FLOW SIM HYFLOS SMALL TURRET FIRING FIXTURE NON-FIRING AUTO AMMO LOADER FOR TANKS

INSTALLATION RSCH+DEVELOPMENT TECH SUPPORT ACTIVITY FT. MONMOUTH NJ

DIR. EDWARD J. FISTER

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 11.004 | 10.919 |
| TOTAL PROCUREMENT | 0.300 | 0.120 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.000 | 0.000 |
| TOTAL ANNUAL LAB | 11.304 | 11.019 |
| TOTAL INHOUSE | 11.068 | 10.964 |
| TOTAL INHOUSE RDT+E | 10.768 | 10.864 |
| ANNUAL OPERATING COST | 1.716 | 1.918 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 69 | 0 | 8 | 61 |
| CIVILIAN | 595 | 0 | 93 | 502 |
| TOTAL | 664 | 0 | 101 | 563 |

| ACRES | SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET) | | | | COST (MILLION \$) | |
|-------|--|-------|---------|---------|-------------------|-------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 136 | 71.300 | 9.700 | 309.900 | 390.900 | 8.701 | 6.940 |

...MISSION
COMPOSITE MATERIALS.
ANTENNA MASTS AND MECHANICAL STRUCTURES.
VEHICULAR AND MARINECRAFT INSTALLATIONS.
COMPUTER AIDED DESIGN TECHNIQUES.

...CURRENT IMPORTANT PROGRAMS
MECHANICAL ENGINEERING-AIRBORNE EQUIPMENT.
MECHANICAL ENGINEERING-GROUND EQUIPMENT.
CRYOGENICS.
ENVIRONMENTAL EQUIPMENT INSTALLATIONS.
SHELTER INSTALLATIONS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES
ELECTROMAGNETIC CAPABILITY FOR RFI.
ENVIRONMENTAL CONTROL-PHYSICAL AND MECHANICAL.
AIRCRAFT VIBRATION MEASUREMENTS.
COMPUTER AIDED DESIGN FABRICATION.
MODEL SHOP FABRICATION-ALL CRAFTS.
TEST AND MEASURING EQUIPMENT CALIBRATION AND REPAIRS.
MATHEMATICAL COMPUTATIONS AND STATISTICS.

INSTALLATION TANK-AUTOMOTIVE COMMAND LABS., WARREN, MICH.

DIR. COL L.F. FELDER DEPUTY DIR. DR. W.F. BANKS

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 18.362 | 25.892 |
| TOTAL PROCUREMENT | 10.883 | 3.738 |
| TOTAL O+M | 13.952 | 10.187 |
| TOTAL OTHER | 0.184 | 0.231 |
| TOTAL ANNUAL LAB | 43.381 | 39.246 |
| TOTAL INHOUSE | 20.963 | 21.031 |
| TOTAL INHOUSE RDT+E | 8.576 | 10.703 |
| ANNUAL OPERATING COST | 8.542 | 10.017 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|---|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 19 | 0 | 20 | 0 | |
| CIVILIAN | 978 | 6 | 427 | | 551 |
| TOTAL | 997 | 6 | 447 | | 551 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|-------|---------|-------------------|--------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 1125 | 315.908 | 0.000 | 0.000 | 315.908 | 13.183 | 16.273 |

...MISSION

RESPONSIBLE FOR RESEARCH, CONCEPT, DESIGN, DEVELOPMENT, FABRICATION, ADVANCED PRODUCTION ENGINEERING, SUPPORT TO PRODUCTION, FOR PRESENT AND FUTURE VEHICLES SYSTEMS AND SUB-SYSTEMS OF TANK-AUTOMOTIVE MATERIEL AND ITS RELATED SCIENCES

...CURRENT IMPORTANT PROGRAMS

AUTOMATIC TEST EQPT FOR INTERNAL COMBUSTION ENGINE POWERED MATERIAL
MID-RANGE AND LONG RANGE CONCEPT STUDIES CN FUTURE TRANSPORT VEHICLES
MID-RANGE AND LONG RANGE CONCEPT STUDIES CN FUTURE TACTICAL VEHICLES
HYBRID ENGINE DEVELOPMENT
RIVERINE RESEARCH

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONCEPT FORMULATION
VEHICLE SUBSYSTEM INTEGRATION
ANALYTICAL PREDICTION OF MILITARY VEHICLE PERFORMANCE
VEHICLE MOTION SIMULATOR
RIVER SIMULATOR FACILITY AND LAND LOCOMOTION SOIL BINS
POLLUTION ABATEMENT
VEHICLE SIGNATURE PROGRAM
VEHICULAR NOISE REDUCTION PROGRAM
PARTICLE DYNAMICS LABORATORY
METAL ANAL WITH MICROPROBE ELECTRON MICROSCOPE ANALYZER AND TECHNIQUES
DEVELOPMENT OF IMPROVED ARMOR WELDING AND FABRICATION
LOW TEMPERATURE, SHOCK AND VIBRATION TEST FACILITIES

INSTALLATION TROPIC TEST CENTER, FT. CLAYTON, CANAL ZONE

C.O. COL HYRUM DALLINGA TECH. ADV. FRANK S. MENDEZ

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 2.588 | 2.873 |
| TOTAL PROCUREMENT | 0.037 | 0.037 |
| TOTAL O+M | 0.008 | 0.013 |
| TOTAL OTHER | 1.452 | 1.975 |
| TOTAL ANNUAL LAB | 4.085 | 4.898 |
| TOTAL INHOUSE | 3.930 | 4.596 |
| TOTAL INHOUSE RDT+E | 2.433 | 2.571 |
| ANNUAL OPERATING COST | 0.494 | 0.611 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 164 | 0 | 10 | 154 |
| CIVILIAN | 91 | 2 | 21 | 70 |
| TOTAL | 255 | 2 | 31 | 224 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|--------|--------|---------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 37210 | 86.218 | 59.294 | 27.847 | 173.359 | 3.160 | 2.220 |

...MISSION

PLAN AND CDT ENVIRONMENTAL PHASES OF ENGR, EXPANDED SVC, INTEGRATED ENGR /SVC EVAL, CHECK, AND CONFIRMATORY TESTS. SPT TROPICAL ENVIRONMENTAL TESTS CDT BY OTHER AGENCIES. CDT RSCH IN TROPICAL ENVIRONMENTS.

...CURRENT IMPORTANT PROGRAMS

IN-HOUSE LABORATORY INDEPENDENT RESEARCH ILIR .
DETERMINATION OF OPTIMUM TROPICAL STORAGE + EXPOSURE SITES, PHASE I AND PHASE 2. DETERMINATION OF TERRAIN FACTORS AFFECTING SEISMIC SIGNAL PROPAGATION.
ENVIRONMENTAL MAPPING OF TROPIC TEST SITES.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

EVAL AND RECM AS TO TEST ITEM SUITABILITY FOR PRESCRIBED USE. RECM TO HQ USATECOM RSCH PROJ IN SPT OF ARMY RDT+E. PLAN AND SPT RDT+E ACTIVITIES FOR DOD OR OTHER GOVT AGENCIES. NATURAL TROPICAL ENVIRONMENT. FIRING RANGES NATURAL TERRAIN MOB COURSES. AMMO TEST STORAGE AND FUNCTIONING AREAS. CHEM, BIO, ELCT, AND CALIBRATION LABS. JUNGLE GRASS AND COASTAL MATL EXPOSURE SITES. JUNGLE RADIO RANGING SITES. PHOTOGRAPHIC SUPPORT FACILITIES. TECHNICAL OPERATIONS SUPPORT FACILITY, POL TANK FARM.

INSTALLATION WALTER REED ARMY INST. OF RES., WASH., D.C.

C.O. COL E.L. BUESCHER

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 11.387 | 12.742 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 2.226 | 2.203 |
| TOTAL OTHER | 4.211 | 4.500 |
| TOTAL ANNUAL LAB | 17.824 | 19.445 |
| TOTAL INHOUSE | 17.824 | 19.445 |
| TOTAL INHOUSE RDT+E | 11.387 | 12.742 |
| ANNUAL OPERATING COST | 2.900 | 2.900 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 401 | 165 | 256 | | 105 |
| CIVILIAN | 732 | 56 | 347 | | 385 |
| TOTAL | 1133 | 221 | 643 | | 490 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|--------|-------|---------|-------------------|--------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 1170 | 333.200 | 57.500 | 0.000 | 440.700 | 2.000 | 12.276 |

...MISSION

PERF MED R+D AND CONDUCTS GRAD EDUC IN FLD OF MED, VET MED + APPLIED MED SCI. SERVES AS CONSULTING AND DIAGNOSTIC REF LAB FOR ARMY. PROV ADVISORY SVC ON PROB OF EPIDEMIOLOGY IN MIL MED + ALLIED FLD. PROV TECH QLTY CNTL OF BIO PROD DEV. PRODC + DISTR BIO PROD NOT AVAIL COM SOURCES

...CURRENT IMPORTANT PROGRAMS

DISCOVER EFFECTIVE PREVENTIVE AND TREATMENT AGENTS FOR DRUG REFRACTORY MALARIA. DEVELOP MODES OF CONTROL OF MENINGOCOCCAL AND OTHER RESPIRATORY DISEASES OF RECRUITS. DEFINE THE ECOLOGY OF DRUG ABUSE IN SOLDIERS. IMPROVE BLOOD LINES AND PERFORMANCE OF MILITARY DOG. DEVELOP IMPROVED SURGICAL MANAGEMENT OF SEVERELY INJURED COMBAT CASUALTIES.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

RESEARCH, TEACHING, AND REFERENCE LABORATORY SERVICES SUMMARIZE MAJOR FUNCTIONS IN THE AREAS OF PREVENTIVE MEDICINE, INFECTIOUS DISEASES, SURGERY, NEUROPSYCHIATRIC DISEASES, INTERNAL MEDICINE, MEDICAL CHEMISTRY AND BASIC MEDICAL SCIENCES. HIGHLY SOPHISTICATED MEDICAL EQUIPMENT IN ALL AREAS OF INVESTIGATION, ELECTRON MICROSCOPES, AUTOMATED CHEMICAL ANALYSIS SYSTEMS, CHEMICAL TYPEWRITERS, BEHAVIORAL RESEARCH INSTRUMENTATION. THE WRAIR MAINTAINS LABORATORY AND RESEARCH FACILITIES AT FT. MEADE, MD, EDGEWOOD ARSENAL, MD, AND SEATO HQ, BANGKOK, THAILAND. THE WRAIR IS CAPABLE OF CONDUCTING RESEARCH IN A VAST NUMBER OF AREAS.

INSTALLATION WATERVLIET ARSENAL LABS., WATERVLIET, N.Y.

C.O. COL CHRISTOPHER MAGGIO TECH. DIR. CR. ROBERT E. WEIGLE

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 6.737 | 7.257 |
| TOTAL PROCUREMENT | 6.730 | 2.551 |
| TOTAL O+M | 1.334 | 0.765 |
| TOTAL OTHER | 1.391 | 0.025 |
| TOTAL ANNUAL LAB | 16.192 | 10.606 |
| TOTAL INHOUSE | 15.502 | 9.240 |
| TOTAL INHOUSE RDT+E | 6.170 | 6.086 |
| ANNUAL OPERATING COST | 3.223 | 3.280 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 4 | 1 | 3 | 1 |
| CIVILIAN | 452 | 42 | 169 | 283 |
| TOTAL | 456 | 43 | 172 | 284 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|--------|-------|---------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 4 | 216.559 | 23.250 | 0.000 | 239.809 | 2.365 | 3.436 |

...MISSION

DESIGN + DEV ARTILLERY, TANK, AIR DEFENSE + SECONDARY CANNON ABOVE 20MM + SPARE PARTS SUCH AS BREECH MECH S, MUZZLE DEVICES, BCRC EVACUATORS + SCAVENGERS + AUTOLOADERS, SYS MGT, DESIGN + DEV OF MORTARS + REC RIFLES. CONDUCT BASIC + APPL RESEARCH + MFG TECH TO SPT THE DEVELOPMENT MISSION

...CURRENT IMPORTANT PROGRAMS

DEV OF 152MM XM150 GUN-LAUNCHER, MAIN ARMAMENT FOR XM70 MAIN BATTLE TANK
DEV OF LIGHT WEIGHT COMPANY MORTAR SYSTEM
APPL OF FRACTURE MECH S TO FATIGUE LIFE PREDICTIONS FOR CANNON TUBES
DEV OF CANNON, 155MM HOW XM199 FOR 155MM FOW XM198. DEV OF COMPOSITE SYSTEMS WITH METAL MATRICES + INORGANIC FIBERS FOR HI-TEMP APPLICATIONS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

UNIQUE FACILITIES + CAPABILITIES INCLUDED HIGH PRESSURE METALLURGY WITH 20-30 K-BAR FLUID EXTRUSION PRESS, WHISKER GROWTH + TEST, NEUTRON ANALYSIS ISOTOPE COUNTING, DYNAMIC TEST OF BREECH COMPONENTS + TUBE SECTIONS FULL SIZE BY PRESSURE-PULSE SIMULATING FIRING LOADS, EXP STRESS ANALYSIS THRU 2+3 DIMENSIONAL PHOTOELASTICITY, COMP. MAT LS ELECTRODEPOSITION VACUUM COATER + ELECTRON-BEAM VAPOR-DEPOSITION ENCLOSED PROOF RANGE 20MM MAX, ELECTRON MICROSCOPY 2.3 ANGSTROM S RESOLUTION + 250000X MAG, CRYOGENICS HELIUM DEWAR APP TO TEMPS OF 4 KELVIN, HI-PERFORMANCE SHOCK TEST 1200 LBS TO 1500 G S FOR GUN COMPONENTS, HI-TEMP VACUUM FURNACE 3000 C MAX, TIME OF FLIGHT MASS SPECTROMETER, 20000 GAUSS MAGNET FOR TEST OF HIGH + CRYOGENIC TEMP SPECIMENS, ELECTROPLATING, ANODIZING + TITANIUM HARD COAT PROCESSES, ELECTRON MICROPROBE ANALYZER 8-UR IN PPM, IBM 360-44 COMPUTER

INSTALLATION WHITE SANDS MISSILE RANGE, WHITE SANDS, N.M.

C.O. MAJ GEN E.H. DESAUSSURE TECH. DIR. DR. R.H. DLNCAN

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 93.977 | 94.788 |
| TOTAL PROCUREMENT | 5.794 | 5.563 |
| TOTAL O+M | 1.080 | 1.080 |
| TOTAL OTHER | 7.142 | 7.353 |
| TOTAL ANNUAL LAB | 107.993 | 108.784 |
| TOTAL INHOUSE | 88.096 | 91.967 |
| TOTAL INHOUSE RDT+E | 74.245 | 78.277 |
| ANNUAL OPERATING COST | 23.502 | 22.880 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 1330 | 4 | 271 | | 359 |
| CIVILIAN | 3640 | 8 | 564 | | 3076 |
| TOTAL | 4970 | 12 | 1535 | | 3435 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|---------|----------------------------------|---------|----------|----------|-------------------|---------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 3622273 | 1421.093 | 393.289 | 2807.128 | 4621.510 | 162.286 | 137.866 |

...MISSION

MISSION-OPERATE A NATIONAL MISSILE RANGE FOR SUPPORT OF ALL APPROVED MISSILE AND RELATED TEST PROGRAMS, INDEPENDENTLY TEST AND EVALUATE ARMY MISSILE AND ROCKET SYSTEMS, AND ENGINEER AND DEVELOP RANGE INSTRUMENTATION SYSTEMS FOR GATHERING TEST DATA

...CURRENT IMPORTANT PROGRAMS

PULSE-DOPPLER RADAR APPLICATIONS
DISTANT OPTICAL ATTITUDE MEASURING SYSTEM
TRANSPONDER DEVELOPMENT
LASER RANGING AND TRACKING SYSTEM
COHERENT BEACON CHECKOUT SYSTEM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

GROUND AND FLIGHT SAFETY, OBTAINING FLIGHT TRAJECTORY AND EVENT DATA, RECOVERING MISSILES OR PORTIONS THEREOF, REDUCING AND PUTTING INTO READABLE FORMS DATA COLLECTED BY RANGE INSTRUMENTS, ENGINEERING AND DEVELOPMENT OF RANGE INSTRUMENTATION, INDEPENDENTLY TEST AND EVALUATE ARMY WEAPONS SYSTEMS
EVALUATE GUIDANCE AND CONTROL SYSTEMS, STRUCTURAL INTEGRITY, PROPULSION SYSTEMS, ELECTROMAGNETIC RADIATION EFFECTS, ANALYSIS OF CHEMICAL AND METALLOGRAPHIC EFFECTS, MICROBIOLOGICAL EFFECTS, CLIMATIC ENVIRONMENTAL EFFECTS, TEST AND EVALUATE WARHEADS AND SPECIAL WEAPONS, WEAPONS SIMULATION, NUCLEAR EFFECTS TESTING, COUNTER-COUNTER MEASURE TESTING, ELECTRONIC AND OPTICAL TRACKING SENSORS AND DATA TRANSMISSION REQUIRED TO PROVIDE TEST DATA ON MISSILES AND RELATED PROGRAMS

INSTALLATION YUMA PROVING GROUND, YUMA, ARIZ

C.O. COL NORMAN L. ROBINSON TECH. ADV. FLOYD E. WATTS

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 9.437 | 10.571 |
| TOTAL PROCUREMENT | 8.948 | 10.628 |
| TOTAL O+M | 2.311 | 0.775 |
| TOTAL OTHER | 4.661 | 4.958 |
| TOTAL ANNUAL LAB | 25.357 | 26.932 |
| TOTAL INHOUSE | 25.357 | 26.932 |
| TOTAL INHOUSE RDT+E | 9.437 | 10.571 |
| ANNUAL OPERATING COST | 9.221 | 10.541 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 461 | 0 | 371 | 90 |
| CIVILIAN | 761 | 0 | 32 | 729 |
| TOTAL | 1222 | 0 | 403 | 819 |

| ACRES | SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET) | | | COST (MILLION \$) | | |
|---------|--|--------|---------|-------------------|-----------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 1043463 | 166.267 | 72.380 | 175.029 | 413.676 | 85.295 | 54.881 |

...MISSION

PLAN, CONDUCT, RPT ENG TEST AIRDROP MAT AND LONG RANGE TUBE ARTY
DESERT ENVIRONMENT TEST OF ARMY MATL AS DIRECTED
PLAN CONDUCT RPT ENG DESIGN PROC AND PCST PRCD TEST AS DIRECTED
PLAN CONDUCT RPT ENG DESIGN TEST OF AIRCRAFT WEAPONS SYSTEM

...CURRENT IMPORTANT PROGRAMS

AIRCRAFT RECOVERY KIT
TRUCK, 5 TON XM809 SERIES
HET 70
TACFIRE
ROCKET 2.75 INCH BASE LINE ACCURACY

...FUNCTIONS/EQUIPMENT/CAPABILITIES

BALLISTIC MEASUREMENT RANGES
ENG TEST FACILITIES
VEHICLE FIELD TEST FACILITIES
TEST COURSES
DESERT TERRAIN TEST AREAS
CONTROLLED IMPACT TEST FACILITY
INSTRUMENTED DROP ZONES
RADIO TELEMETRY
DATA PROCESSING CENTER
RANGE TIMING
OPTICAL PHOTO ENG FACILITIES

INSTALLATION NAVAL AEROSPACE MEDICAL RESEARCH LAB, PENSACOLA, FLA.

C.O. CAPT N.W. ALLEBACH TECH. ADV. DR. A. GRAYBIEL

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 3.579 | 3.538 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.429 | 0.440 |
| TOTAL ANNUAL LAB | 4.008 | 3.978 |
| TOTAL INHOUSE | 4.008 | 3.978 |
| TOTAL INHOUSE RDT+E | 3.579 | 3.538 |
| ANNUAL OPERATING COST | 0.179 | 0.250 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 26 | 12 | 17 | 9 |
| CIVILIAN | 114 | 16 | 46 | 68 |
| TOTAL | 140 | 28 | 63 | 77 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------------------|-------|--------|---------|-------------------|-----------|
| | SPACE (THOUSANDS OF SQUARE FEET) | LAB | ADMIN | OTHER | TOTAL | REAL PROP |
| 0 | 96.787 | 9.604 | 14.893 | 121.284 | 2.000 | 1.654 |

...MISSION

CONDUCT RESEARCH IN AVIATION AND SPACE MED AVIATION PSYCHOLOGY AND PHYSIOLOGY EVAL AEROMED EQUIP SUPPORT NAV AIR TRNG IN SELECTION INDOC AND INSTR OF NONMED AVIATION PERS PROVIDE CONSULT IN AVIATION MED MATTERS

...CURRENT IMPORTANT PROGRAMS

PREV OF DISORIENT AND VESTIBULAR DISTURBANCES IN FLIGHT
AVIATION PERS PROCUREMENT AND SELECTION
RESPONSE TO IMPACT ACCELERATION
PHYSIO EFFECTS OF NONIONIZING RADIATION
EVAL CARDIOVASCULAR DISEASE RISK

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FLIGHT PERS PHYSICAL FITNESS PSYCHOLOGICAL ATTITUDES AND TOLERANCE TO STRESS STUDIES OF FORCE ACOUSTIC ELECTROMAG RADIATION AND ATMOSPHERIC ENVIRONS SLOW ROTATION ROOM HUMAN DISORIENT DEVICE CORIOLIS ACCELER PLATFORM STILLE WERNER CHAIR SHIP MOTION STIMULATOR ELECTRON MICROSC SUPER CONDUCTING MAGNET LAB EQUIPPED FOR HUMAN AND ANIMAL EXPERIMENTS AIRCRAFT EQUIPPED FOR INFLIGHT EEG AND ECG ANIMAL HOUSING FACILITIES WITH OR NUIVAC 418

INSTALLATION NAVAL AEROSPACE RECOVERY FACILITY, EL CENTRO, CALIF.

C.O. CAPT CLARENCE E. RICH TECH. DIR. HOWARD C. FISH

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 2.428 | 2.993 |
| TOTAL PROCUREMENT | 0.080 | 0.100 |
| TOTAL O+M | 0.247 | 0.400 |
| TOTAL OTHER | 1.280 | 1.700 |
| TOTAL ANNUAL LAB | 4.035 | 5.193 |
| TOTAL INHOUSE | 3.635 | 3.965 |
| TOTAL INHOUSE RDT+E | 2.028 | 1.765 |
| ANNUAL OPERATING COST | 1.300 | 1.500 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 167 | 1 | 16 | | 151 |
| CIVILIAN | 109 | 0 | 23 | | 86 |
| TOTAL | 276 | 1 | 39 | | 237 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|--------|--------------------|--------|---------|---------|-------------------|-------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 101290 | 44.000 | 10.000 | 263.000 | 317.000 | 8.098 | 2.400 |

...MISSION

DEVELOP TEST EVALUATE PARACHUTES AND RELATED SYSTEMS HUMAN ESCAPE METHODS AND SYSTEMS RETARDATION AND RECOVERY SYSTEMS RESCUE SURVIVAL AND PERSONAL SAFETY EQUIPMENT SYSTEMS FOR RETARDATION AND RECOVERY OF ORDNANCE, AIRCRAFT, MISSILES AND CAPSULE ASSEMBLIES AND LOGISTIC AERIAL DELIVERY

...CURRENT IMPORTANT PROGRAMS

DECELERATION PARACHUTE FOR CLASSIFIED AERIAL ORDNANCE WEAPON
FLIGHT PERFORMANCE TEST F-14 AND S3A ROCKET EJECTION SEAT SYSTEMS
FLEET SUPPORT PARACHUTE MAINTENANCE PUBLICATIONS
SUPPORT MCDEC SPIE SYSTEM QUAL AID PROTOTYPE PRODUCTION
CONDUCT EVAL AND TRAINING DEFINITION MARS IN FLIGHT DRONE RECOVERY SYSTEM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

LEAD LAB RDT PERSONNEL RECOVERY AND RETARDATION SYSTEMS
DIRECT FLEET SUPPORT INCL IN-SERVICE ENGRG RE UR S ON ASSIGNED EQUIPMENTS
PROVIDE TECH ASST AND LAND AND WATER TEST RANGE SUPPORT NOL WHITE OAK
PROVIDE INSTRUMENTED RANGES AND FLIGHT TEST SUPPORT NAVAIR CONTRACTORS
PROVIDE PHOTO INDUST SHOPS MAT LAB SUPPORT 6511TH PER DODJPTF DIRECTIVE
ON-SITE QUAL ASSURANCE SUPPORT NASA PARAWING PROJECTS
PROVIDE TECH ASST NWC RE DEV 8 QUAL BIOMED PHYSIOLOGICAL INSTRUMENTATION
SUPPORT NAVAIRDEVCON RE ESCAPE SYSTEMS AND SEARCH RESCUE AND SURVIVAL
EQUIPMENT DEV SYSTEM INTEGRATION AND FLIGHT TEST
DTE RELATED PARACHUTE GROUND SUPPORT EQUIP AND INSTALLATIONS
EFFECT PARACHUTE/COMPONENTS STANDARDIZATION OF SPEC DRAWINGS AND PUBS
AS CFA DIRECT AND FUND RELATED PFA EFFORTS AS REQUIRED

INSTALLATION NAVAL AIR DEVELOPMENT CENTER, JOHNSVILLE, PA.

C.O. CAPT B. MC CAULLEY TECH. DIR. G.L. HOLLINGSWORTH

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 51.269 | 85.772 |
| TOTAL PROCUREMENT | 18.295 | 11.669 |
| TOTAL O+M | 6.981 | 7.657 |
| TOTAL OTHER | 6.581 | 6.079 |
| TOTAL ANNUAL LAB | 93.126 | 111.175 |
| TOTAL INHOUSE | 57.411 | 63.405 |
| TOTAL INHOUSE RDT+E | 36.316 | 45.298 |
| ANNUAL OPERATING COST | 12.647 | 12.826 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 427 | 13 | 78 | 349 |
| CIVILIAN | 2496 | 23 | 1049 | 1447 |
| TOTAL | 2923 | 41 | 1127 | 1796 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|--------------------|--------|---------|----------|-------------------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 750 | 883.839 | 55.671 | 413.524 | 1353.034 | 22.163 | 37.897 |

...MISSION

CONDUCT RESEARCH, DESIGN, DEV, TEST AND EVAL OF AERONAUTICAL SYSTEMS
AND COMPONENTS PERFORM RESEARCH AND DEV IN AVIATION MEDICINE

...CURRENT IMPORTANT PROGRAMS

SHIP AIR SYSTEMS INTEGRATION SASI
LIGHT AIRBORNE MULTI-PURPOSE SYSTEMS LAMPS
ADVANCED ACOUSTIC SENSORS
HELICOPTER SENSOR SYSTEMS
AIRCREW LIFE SUPPORT SYSTEMS, PROTECTIVE CLOTHING AND DEVICES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

RSH, DESIGN, DEVELOP, TEST, LAB AND FLIGHT EVAL, LONG-RANGE AIR WARFARE
STUDIES, THEORETICAL ANALY, ENGINE ANAL AND FEAS PROTOTYPE DEVELOP OF SYS
IN ABN ASW, ATTACK CARRIER WARFARE AND OCEAN SURVEILLANCE ENGINE ANAL ON
AERO SYSTEM COMP AND AREAS OF TECHNOLOGY IN ABN ASW SYSTEMS COMMUNICATI
ONS, NAVIG, DIGITAL COMPUTATION, COUNTERMEAS, AEW, FC, AERCSpace MED,
BIOPHYSICAL EFFECTS OF ACCELERATION, HUMAN FACTORS, AIRCREW PERSONAL
AND SAFETY EQUIP SPEC A/C CONFIG CONTROL SYSTEM, ABN WEAPONS HAND EQUIP,
ABN PHOTO EQUIP, MATERIALS AND PROCESSES USED IN A/C AIRFRAME STRUCTURES
AND SUPPORT TO OTHER ACTIVITIES AS DIRECTED.

INSTALLATION NAVAL AIR ENGINEERING CENTER, PHILADELPHIA, PA.

C.O. CAPT C.T. FROSCHER TECH. DIR. J.M. DUNFORD

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 8.085 | 7.550 |
| TOTAL PROCUREMENT | 43.610 | 40.195 |
| TOTAL O+M | 20.724 | 19.154 |
| TOTAL OTHER | 4.582 | 3.705 |
| TOTAL ANNUAL LAB | 77.001 | 70.600 |
| TOTAL INHOUSE | 37.545 | 38.780 |
| TOTAL INHOUSE RDT+E | 5.463 | 4.805 |
| ANNUAL OPERATING COST | 8.367 | 9.624 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 40 | 0 | 12 | | 28 |
| CIVILIAN | 2184 | 7 | 361 | | 1823 |
| TOTAL | 2224 | 7 | 373 | | 1851 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|---------|---------|----------|-------------------|--------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 560 | 1373.426 | 177.625 | 723.209 | 2274.260 | 33.546 | 18.244 |

...MISSION

CONDUCT A PROG. OF RDT+E, SYS. INTEGRATION, LIMITED PRODN, PROCUREMENT + FLEET ENGINEERING SUPP. IN LAUNCHING, RECOVERY + LANDING AIDS FOR A/C IN NAVAL INTELLIGENCE PROCESSING SYSTEMS + IN GROUND SUPPORT EQUIP. FOR A/C, AIRBORNE WEAPON SYS. + NAVAL INTELLIGENCE PROCESSING SYS.

...CURRENT IMPORTANT PROGRAMS

SCA CONTROLS SHIP AVIATION SUPPORT CONCEPTS
F-14 JET BLAST DEFLECTOR DEVELOPMENT
PROGRAMMED DRUM AIRCRAFT ARRESTING GEAR
VERSATILE AUTOMATIC SHIP TESTER
DEMOUNTABLE JET TEST FACILITY

...FUNCTIONS/EQUIPMENT CAPABILITIES

CONDUCT RDT+E ON A/C LAUNCHING AND RECOVERY EQUIP., VISUAL LANDING AIDS, NAVAL INTELLIGENCE PROCESSING SYSTEMS, GROUND SUPPORT EQUIP. AND RELATED SYS. PROVIDE FLEET SUPPORT FOR INST LD EQUIP. DETERMINE SUPP. EQUIP. REQUIREMENTS BY PERFORMING ANALYSES OF END-ITEMS. MANAGE TEST PROGRAMS FOR EQUIP. TESTED ON VERSATILE AVIONICS SHOP TEST SYSTEM. MACHINE SHOP WITH CONVENTIONAL AND AUTOMATED MACHINE TOOLS CAPABLE OF PROTOTYPE AND LIMITED PRODUCTION. IBM 360/50 COMPUTER FOR ENGINEERING ANALYSES, LAND G MAT TEST FACILITY FOR FULL SCALE SIMULATION OF RUNWAY LOADING, TEST FACILITY FOR EVAL. OF WIRE ROPE COMPONENTS. TEST LAB FOR DEVELOPMENT TESTING OF HYDRAULIC, PNEUMATIC AND ELECTRICAL EQUIP. UNDER CONDITIONS SIMULATING FLEET USE.

INSTALLATION NAVAL AIR TEST CENTER, PATUXENT RIVER, MD.

C.O. RADM ROY M. ISAMAN TECH. DIR. JOHN B. PARADIS

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 27.514 | 30.002 |
| TOTAL PROCUREMENT | 19.996 | 24.245 |
| TOTAL O+M | 5.645 | 5.645 |
| TOTAL OTHER | 20.180 | 20.399 |
| TOTAL ANNUAL LAB | 73.335 | 80.291 |
| TOTAL INHOUSE | 66.536 | 62.347 |
| TOTAL INHOUSE RDT+E | 24.851 | 25.341 |
| ANNUAL OPERATING COST | 13.235 | 12.788 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 1293 | 1 | 198 | | 1095 |
| CIVILIAN | 2091 | 3 | 394 | | 1697 |
| TOTAL | 3384 | 4 | 592 | | 2792 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|---------|----------|----------|-------------------|--------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 6861 | 741.022 | 186.064 | 3094.351 | 4021.437 | 114.073 | 40.634 |

...MISSION

COORDINATE AND PERFORM TEST AND EVALUATION OF AIRCRAFT WEAPONS SYSTEMS, THEIR COMPONENTS AND RELATED EQUIPMENT, CONDUCT TEST PILOT TRAINING, PROVIDE TECHNICAL ADVICE AND ASSISTANCE TO BIS NASC CONTRACTORS, ETC.

...CURRENT IMPORTANT PROGRAMS

EVALUATION NEW AIRCRAFT F-14 S3A AV8A AH1J SH3DLAMPS A7 A4M EP3E A6E
CHECKOUT ALL AIRCRAFT IN AIMS AIRSPEED/ALTIMETER SYSTEMS CHECKOUT ALL AC
LS DEVELOPMENT + EVAL OF ASW SYSTEMS TACTICAL SUPPORT CENTER P3C CVTSC
EVAL GROUND SUPPORT EQUIP VAST HUMAN FACTORS GRAN HUD
ELECTRONIC WARFARE EVALS TRAM CHARGER BLUE EA6A

...FUNCTIONS/EQUIPMENT/CAPABILITIES

DEVELOP AND TEST CONCEPTS FOR OPERATING AIRPLANES FROM CARRIERS// EVAL
AIRCRAFT MAINTENANCE AND RELIABILITY// PERFORM ACCELERATED SERVICE TESTS
//PERFORM ELECTROMAGNETIC COMPATIBILITY TESTS//DEVEL AND EVAL AIRCRAFT
ELEC SYSTEMS//RESEARCH AND DEVEL AIRCRAFT INSTRUMENTATION AND DATA
GATHERING DEVICES AND SYSTEMS//ESTABLISH STORE RELEASE ENVELOPES//
RECOMMEND DESIGN CHANGES TO AIRCRAFT//CONDUCT NAVY PRELIM EVALS//MAJOR
FACILITIES//CATAPULTS AND ARRESTING GEARS//INTERFERENCE TEST HANGAR//
AVIONICS LAB//INSTRUMENTED THEODOLITE RADAR + ECM RANGE//EXTENSIVE ELEC
AND ENVIRONMENTAL LABS//EXTENSIVE INSTRUMENTATION, TELEMTRY, AND
COMPUTER CAPABILITY//ENGINE TEST CELLS//CVER 120 TEST AIRCRAFT//LONG
RUNWAYS//AIRCRAFT WEIGHING SCALES//HYDROFOIL SEAPLANE TEST CAPABILITY//
SURFACE EFFECTS SHIPS TEST FACILITIES.

INSTALLATION NAVAL AIR TEST FACILITY, LAKEHURST, N. J.

C.O. CAPT CHARLES L. AXELL TECH. DIR. NICHOLAS IVANOVIC

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 1.028 | 0.820 |
| TOTAL PROCUREMENT | 3.350 | 2.337 |
| TOTAL O+M | 3.801 | 3.294 |
| TOTAL OTHER | 1.538 | 1.168 |
| TOTAL ANNUAL LAB | 9.717 | 7.619 |
| TOTAL INHOUSE | 8.838 | 7.613 |
| TOTAL INHOUSE RDT+E | 0.968 | 0.814 |
| ANNUAL OPERATING COST | 4.159 | 3.507 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 155 | 0 | 8 | | 147 |
| CIVILIAN | 414 | 0 | 75 | | 339 |
| TOTAL | 569 | 0 | 83 | | 486 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|--------|--------|---------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 2500 | 59.204 | 30.498 | 91.906 | 181.608 | 33.801 | 7.132 |

...MISSION

TO CONDUCT TESTS AND EVAL OF LAUNCHING RECOVERY AND VISUAL LANDING AIDS SYSTEMS AND RELATED EQUIPMENT PROVIDE TEST SITES FACILITIES FOR DEV TEST OF SI EQUIPMENT CONDUCT R AND D OF EQUIP AND INSTR USED IN TEST AND EVALUATION OF SI EQUIPMENT

...CURRENT IMPORTANT PROGRAMS

EVAL OF INTEGRATED CATAPULT CONTROL STATION
HELICOPTER SUPPORT TEST AND EVALUATION CENTER
CVAN-68 JET BLAST DEFLECTOR DEV AND EVAL PROGRAM
CVAN-68 FLUSH DECK NOSE GEAR LAUNCH DEV AND EVAL PROGRAM
CVAN-68 DEV AND EVAL PROGRAM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CARRIER CONFIGS DUPLICATED AND SERV OPS SIMULATED WITH NAVAL ACFT
CAT DEV FAC SHIPBOARD USED TO DEV EVAL NEW ACFT-CARRIER LAUNCH SYSTEMS
CAT DEV FAC SHOREBASED EXPEDITIONARY CAT FOR DEV MARINE CORPS
SATS CONCEPT AND REQUIRED ACFT LAUNCHING ACCESSORIES
ARRESTING GEAR DEV FAC SHIPBOARD CONFIGURED TO SIMULATE STANDARD SHIPBOARD ARRESTING GEAR INSTAL MK5 MOD 3 AND MK7 MOD 1 2 AND 3
TEST TRACK FAC 5 TO DEV AND/OR EVAL SHOREBASED AND SHIPBRD ARRS SYS
STEAM PLANT FAC SUPPLIES HIGH PRESS STEAM TO SHIPBOARD CAT SITES
HYDRAULIC TEST FAC CONSISTS OF TWO HYDRAULIC TEST BENCHES
DIGITAL AND ANALOG COMPUTATIONAL FAC PROVIDES FOR SCIENTIFIC PROBLEMS
SOLUTION MIS AND SCIENTIFIC DATA REDUCTION OF ACQUIRED DATA
INSTR MAINT/CALIB FAC MOTION/STILL PHOTO CAP AND FILM DEV LAB

INSTALLATION NAVAL AIR PROPULSION TEST CENTER, TRENTON, N. J.

C.O. CAPT A.D. WILLIAMS

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 8.721 | 13.654 |
| TOTAL PROCUREMENT | 5.438 | 4.000 |
| TOTAL O+M | 0.038 | 0.034 |
| TOTAL OTHER | 0.720 | 0.812 |
| TOTAL ANNUAL LAB | 14.917 | 18.500 |
| TOTAL INHOUSE | 12.836 | 13.330 |
| TOTAL INHOUSE RDT+E | 7.501 | 9.831 |
| ANNUAL OPERATING COST | 3.562 | 3.594 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 10 | 0 | 7 | 3 |
| CIVILIAN | 694 | 0 | 160 | 534 |
| TOTAL | 704 | 0 | 167 | 537 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|--------|---------|---------|-------------------|--------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 66 | 410.900 | 51.800 | 136.000 | 598.700 | 44.293 | 13.191 |

...MISSION

TO TEST AND EVALUATE AIRCRAFT PROPULSION SYSTEMS-THEIR COMPONENTS AND ACCESSORIES AND FUELS AND LUBRICANTS AND TO PERFORM APPLIED RESEARCH AND DEVELOPMENT LEADING TO CORRECTION OF DESIGN DEFICIENCIES AND SERVICE PROBLEMS

...CURRENT IMPORTANT PROGRAMS

XF401-PW-400 PERFORM ALT AND ENVIRONMENTAL DEVELOPMENT TEST AND EVALUATE
TF34-GE-2 EXPLOR-QUAL TESTS FOR PERFORMANCE ALT-ENVIRONMENTAL CONDITION
TF30-P-412 PERFORM QUAL TESTS 1AW MIL-E-5007 SPEC
AVN FUELS AND LUBES MIL-L-23699 CHARACTERISTICS-SPEC-TESTS AND QUALS
YT400-CP-400 ENVIRONMENTAL QUAL TESTS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PROVIDE A TEST AND EVALUATION CENTER FOR AIRCRAFT PROPULSION SYSTEMS AND PROPULSION RELATED COMPONENTS. ENVIRONMENTAL CONDITIONS OF FLIGHT AND SERVICE ARE SIMULATED IN TEST CELLS-ON TEST BENCHES-OR IN THE LABORATORY THE TURBOJET-FAN-LARGE CELLS CAN SIMULATE ALTITUDES FROM SEA LEVEL TO 8000 FT WITH TEMPERATURES FROM MINUS 65 DEG TO PLUS 320 DEG F. THRUST STANDS INSTALLED ARE CAPABLE OF MEASURING THRUST TO 50000 LBS. THESE CELLS ARE FULLY CAPABLE OF TESTING THE LARGER JET ENGINES NOW IN NAVY SERVICE. THE TURBOSHAFT CELLS ARE CAPABLE OF SIMULATING ALTITUDES FROM SL TO OVER 40000 FT WITH SPECIFICATION RANGE OF TEMPERATURES. TEST CELL FACILITIES EXIST FOR COMPLETE RANGE OF SHAFT POWER ENGINES WITH SUB FACILITIES FOR TEST AND EVALUATION OF SHAFT ENGINE COMPONENTS-FUELS-LUBRICANTS-AUX POWER SYSTEMS AND ACCESSORIES

INSTALLATION NAVAL BLOOD RESEARCH LAB., N. H., CHELSEA, MASS.

C.O. CDR C.R. VALERT

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.285 | 0.317 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.135 | 0.121 |
| TOTAL ANNUAL LAB | 0.420 | 0.438 |
| TOTAL INHOUSE | 0.420 | 0.438 |
| TOTAL INHOUSE RDT+E | 0.285 | 0.317 |
| ANNUAL OPERATING COST | 0.045 | 0.045 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 9 | 3 | 4 | | 5 |
| CIVILIAN | 13 | 1 | 2 | | 11 |
| TOTAL | 22 | 4 | 6 | | 16 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|-------|-------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 1 | 6.263 | 0.161 | 1.000 | 7.424 | 0.115 | 0.429 |

...MISSION

CONDUCT RESEARCH AND DEV METHODS FOR LONG TERM PRESERVATION OF BLOOD AND BLOOD PRODUCTS AND EVAL OF USEFULNESS IN OPERATIONAL AREAS AND HOSPITALS

...CURRENT IMPORTANT PROGRAMS

EVAL OF IMPROVED METHODS FOR PRESERVING RED CELLS
 EVAL OF IMPROVED METHODS FOR PRESERVING WHITE BLOOD CELLS
 EVAL OF IMPROVED METHODS FOR COMPONENT THERAPY
 EVAL OF METHODS FOR COLLECTION AND PRESERVATION OF PLATELETS
 DEV IMPROVED PROTOCOL FOR CLINICAL EVALUATION OF FROZEN BLOOD

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PERFORM RDTANDE IN METHODS OF PRESERVING BLOOD AND BLOOD PRODUCTS
 LIQUID AND FREEZE PRESERVATION EQUIPMENT FOR RED BLOOD CELLS PLATELETS
 WHITE BLOOD CELLS PLASMA FRACTIONS EQUIPMENT TO EVAL VIABILITY AND
 FUNCTION OF BLOOD AND BLOOD PRODUCTS

INSTALLATION NAVAL CIVIL ENGINEERING LABORATORY, PORT HUENEME, CAL.

C.O. CAPT E.M. SAUNDERS TECH. DIR. WILLIAM F. BURKART

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 5.773 | 8.008 |
| TOTAL PROCUREMENT | 1.143 | 1.213 |
| TOTAL O+M | 3.782 | 3.358 |
| TOTAL OTHER | 1.295 | 0.491 |
| TOTAL ANNUAL LAB | 11.993 | 13.070 |
| TOTAL INHOUSE | 9.547 | 9.916 |
| TOTAL INHOUSE RDT+E | 4.439 | 6.006 |
| ANNUAL OPERATING COST | 1.678 | 1.675 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 15 | 1 | 7 | 8 |
| CIVILIAN | 390 | 31 | 150 | 200 |
| TOTAL | 405 | 32 | 157 | 208 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|--------|--------|---------|-------------------|-------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 22 | 120.352 | 21.977 | 31.548 | 173.877 | 5.118 | 3.064 |

...MISSION

TO CONDUCT RESEARCH + TO DEVELOP TEST + EVALUATE TECHNIQUES, EQUIPMENT MATERIAL + STRUCTURES BEST SUITED FOR THE CONSTRUCTION, MAINTENANCE AND OPERATION OF FACILITIES FOR ADVANCED BASES. AMPHIBIOUS FORCES, SEAFLOOR OPERATIONS AND THE NAVY SHORE ESTABLISHMENT.

...CURRENT IMPORTANT PROGRAMS

NAVAL SHORE FACILITIES SUPPORT. NAVY SEAFLOOR INSTALLATIONS. AMPHIBIOUS + ADVANCED BASE TECHNOLOGY, ENVIRONMENTAL PROTECTION. ORGANIC MATERIALS. MATERIAL CONTROL DISTRIBUTION + STORAGE COMBAT CONSTRUCTION + UTILITY TECHNOLOGY, TEST EQUIP. TECHNOLOGY. DEEP OCEAN TECHNOLOGY. DEVELOPMENTS ASSIGNED BY SUPT OF SALVAGE. RDT+E FOR SANGUINE + NUCLEAR PROTECTION.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

DEEP OCEAN SIMULATION FACILITY WITH 72 INCH INSIDE DIAMETER BY 10-FT DEEP PRESSURE VESSEL SUSTAINING PRESSURES UP TO 5500 PSI DIVING LOCKER + EQUIPMENT FOR TEN DIVERS, SEAFLOOR SOILS LABORATORY MATERIAL SCIENCE SOLID STATE, METALLURGICAL, PHOTOELASTIC SNOW + ICE LABS. PHOTOGRAPHIC FACILITY ENVIRONMENTAL PROTECTION MONITORING CAPABILITY CDC-8090 COMPUTER/TERMINAL WITH A HIGH SPEED CARD READER + LINE PRINTER DIGITAL MAG TAPE + PAPER TAPE T/O, ANALOG TAPE, ADC + DAC CONVERSION + A PEN PLOTTER + TIE WITH CDC-6600 UNDERSEA DIVER CONSTRUCTION VEHICLES CAV, BTV + NEMO WARPING TUG CORER FOR TAKING UNDISTURBED SAMPLES AT WATER DEPTHS TO 6000 FT INSTITU TESTING EQUIPMENT FOR DEEP OCEAN INCLUDING A VANE SHEAR DEVICE, CONE PENETOMETER, 10 FT CORER, PLATE BEARING TEST DEVICE AND FOUNDATION MONITOR

INSTALLATION NAVY CLOTHING AND TEXTILE RESEARCH UNIT, NATICK, MASS.

C.O. CDR J.L. POOR

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.613 | 0.558 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.578 | 0.607 |
| TOTAL OTHER | 0.026 | 0.022 |
| TOTAL ANNUAL LAB | 1.217 | 1.185 |
| TOTAL INHOUSE | 1.217 | 1.185 |
| TOTAL INHOUSE RDT+E | 0.613 | 0.558 |
| ANNUAL OPERATING COST | 0.120 | 0.160 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 1 | 0 | 1 | | 0 |
| CIVILIAN | 66 | 0 | 24 | | 42 |
| TOTAL | 67 | 0 | 25 | | 42 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|-------|--------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 2 | 10.000 | 7.000 | 3.000 | 20.000 | 0.275 | 0.500 |

...MISSION
CONDUCT RESEARCH, DEVELOPMENT, TEST AND EVALUATION AND GIVE ENGINEERING
SUPPORT IN CLOTHING, TEXTILES AND RELATED FIELDS ASSOCIATED WITH SERVICE
CLOTHING AND ENVIRONMENTAL AND SPECIAL PROTECTIVE CLOTHING

...CURRENT IMPORTANT PROGRAMS
STATIC ELECTRICITY PROPENSITY OF NAVY CLOTHING
DAMAGE CONTROL SUIT SYSTEM
TRI-SERVICE FIRE FIGHTERS CLOTHING
DECOMPRESSION CHAMBER FIRE RESISTANT CLOTHING
NAVY ROCKET PROPELLENT PROTECTIVE CLOTHING

...FUNCTIONS/EQUIPMENT/CAPABILITIES
MAJOR FUNCTIONS
CONDUCT RDT+E IN TEXTILE MATERIALS, LEATHER, PLASTICS, AND RUBBER
DEVELOP NAVY CLOTHING, ACCESSORIES, AND RELATED ITEMS
CONDUCT STUDIES IN ENVIRONMENTAL SCIENCES AND LIFE SUPPORT SYSTEMS
PREPARE SPECIFICATIONS FOR CLOTHING, TEXTILES, FOOTWEAR AND RELATED ITEMS
COORDINATE STANDARDIZATION IN CLOTHING AREAS
PROVIDE TECHNICAL SUPPORT TO ALL DOD AGENCIES IN NAVY CLOTHING AREAS
MAJOR EQUIPMENT AND FACILITIES
TEXTILE LABORATORIES
COLD TEST CHAMBERS
HYDRO-ENVIRONMENT SIMULATOR
HIGH INTENSITY THERMAL TEST UNIT

INSTALLATION NAVAL DENTAL RESEARCH INST., NTC, GREAT LAKES, ILL
C.O. CAPT KIRK C. HOERMAN

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.287 | 0.439 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.012 | 0.000 |
| TOTAL OTHER | 0.192 | 0.270 |
| TOTAL ANNUAL LAB | 0.491 | 0.709 |
| TOTAL INHOUSE | 0.491 | 0.709 |
| TOTAL INHOUSE RDT+E | 0.287 | 0.439 |
| ANNUAL OPERATING COST | 0.029 | 0.030 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 18 | 8 | 12 | 6 |
| CIVILIAN | 12 | 2 | 7 | 5 |
| TOTAL | 30 | 10 | 19 | 11 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|-------|--------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 0 | 6.997 | 0.897 | 8.664 | 16.558 | 0.000 | 0.319 |

...MISSION
CONDUCT RESEARCH IN DENTAL PROBLEMS OF ORAL HEALTH IN NAVAL AND MARCQRP
PERSONNEL AND DELIVERY OF DENTAL CARE

...CURRENT IMPORTANT PROGRAMS
ORAL HEALTH OF NAVAL PERSONNEL
CHEM AND ENZYMOLOGY OF CARIES IN CARIES IMMUNE RECRUITS
BACTERIOLOGY OF SALIVA AND PLAQUE OF CARIES IMMUNE RECRUITS
SELF SUPPORTED MOBILE DENTAL VAN FOR FIELD AND GARRISON
BIOCHEM STUDIES OF ORAL FLUID

...FUNCTIONS/EQUIPMENT/CAPABILITIES
ASSESS DENTAL-HEALTH STATUS OF RECRUITS IMPROVE DISEASE PREVENTION AND
CARE PROCEDURES INCREASE QUALITY AND QUANTITY OF CARE IN COMBAT TROOPS
INCLUDING FACIAL INJURIES DEFINE ORAL DISEASE ETIOLOGY AND DEVELOPMENT
OF SAFE THERAPEUTIC METHODS COMPUTERIZE LOCAL DENTAL MANPOWER AND
RESOURCES MANAGEMENT EXPLORE USE OF RAPID DIAGNOSES FROM LUMINESCENCE OF
BIOLOGICAL MATERIAL AMINO ACID ANALYZER SPECTROPHOTOFUOROMETER 4K
MEMORY CORE COMPUTER PROGRAMMED CLIMATE ROOM MOBILE DENTAL TREATMENT
UNIT ELECTRON MICROSCOPY AND STEREOSCANNING BACTERIAL TAXONOMY SMALL
MOLECULE CHARACTERIZATION VACCINE PRODUCTION AND TESTING PATIENT
MOTIVATION BEHAVIOR DENTAL EQUIP DESIGN AND FABRICATION

INSTALLATION NAVAL ELECTRONICS LABORATORY CENTER, SAN DIEGO, CALIF.

C.O. CAPT N.D. HARDING, JR. TECH. DIR. CR. C.E. BERGMAN

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 37.668 | 39.720 |
| TOTAL PROCUREMENT | 3.974 | 5.581 |
| TOTAL O+M | 7.822 | 8.662 |
| TOTAL OTHER | 6.811 | 5.589 |
| TOTAL ANNUAL LAB | 56.275 | 59.552 |
| TOTAL INHOUSE | 52.000 | 54.627 |
| TOTAL INHOUSE RDT+E | 34.653 | 36.545 |
| ANNUAL OPERATING COST | 10.716 | 12.812 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 118 | 3 | 98 | 20 |
| CIVILIAN | 1455 | 54 | 700 | 755 |
| TOTAL | 1573 | 57 | 798 | 775 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | | |
|-------|----------------------------------|---------|---------|---------|-------------------|-----------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 1987 | 457.011 | 152.725 | 225.883 | 835.619 | 11.898 | 33.971 | |

...MISSION

TO CONDUCT A PROGRAM OF WARFARE ANALYSIS, RESEARCH, DEVELOPMENT, TEST, EVALUATION, SYSTEMS INTEGRATION AND FLEET ENGINEERING SUPPORT IN COMMAND CONTROL AND COMMUNICATIONS TECHNOLOGY.

...CURRENT IMPORTANT PROGRAMS

OPERATIONAL APPLICATIONS OF ELECTRO-OPTICS.
MESSAGE PROCESSING AND DISTRIBUTION SYSTEM FOR CVAN 68.
IMPROVEMENT OF FBM SUBMARINE COMMUNICATIONS.
SYSTEM CONCEPTS FOR INTEGRATED WORLD WIDE OCEAN SURVEILLANCE SYSTEM.
SATCOM FLEET BROADCAST AND SATELLITE DIGITAL DATA LINK

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FUNCTIONS ASSURE MAXIMUM RDT+E CONTRIBUTIONS TO OPERATIONAL CAPABILITY IN COMMAND CONTROL AND COMMUNICATIONS THRU STRONG TECHNICAL DIRECTION, COORDINATION OF DESIGNATED NAVY COMMAND AND CONTROL PROGRAMS. DEVELOP A BALANCED INTEGRATED PROGRAM OF WARFARE ANALYSIS, RESEARCH, DEVELOPMENT, TEST, EVALUATION, SYSTEM INTEGRATION, AND FLEET ENGINEERING SUPPORT. DEVELOP AN OPTIMUM SCIENTIFIC AND PHYSICAL ENVIRONMENT FOR THE ADVANCEMENT OF COMMAND CONTROL AND COMMUNICATIONS TECHNOLOGY. FACILITIES-ADVANCED COMPUTER SCIENCE CENTER, MICROELECTRONICS LAB, ENVIRONMENTAL TEST FACILITY, LASER RESEARCH LAB, SIXTY FOOT DIA RADIO TELESCOPE, ANTENNA MODEL RANGES, HUMAN FACTORS LAB, SYSTEMS EVALUATION FACILITIES, EX USS BUNKER HILL SYSTEMS TEST BED.

INSTALLATION NAVY ELECTRONIC SYST.TEST+EVAL.FAC,PAXUTENT RIVER, MD.

C.O. CDR R.V. WILSON TECH. DIR. R.E. WAXMAN

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 1.708 | 1.615 |
| TOTAL PROCUREMENT | 0.772 | 1.432 |
| TOTAL O+M | 3.718 | 4.476 |
| TOTAL OTHER | 0.865 | 0.689 |
| TOTAL ANNUAL LAB | 7.063 | 8.217 |
| TOTAL INHOUSE | 7.063 | 8.217 |
| TOTAL INHOUSE RDT+E | 1.708 | 1.615 |
| ANNUAL OPERATING COST | 0.518 | 0.618 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 32 | 0 | 6 | 26 |
| CIVILIAN | 156 | 0 | 71 | 85 |
| TOTAL | 188 | 0 | 77 | 111 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|-------|--------|--------|-------------------|-------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 852 | 22.944 | 2.502 | 14.195 | 39.641 | 3.342 | 4.518 |

...MISSION

MISSION TO PROVIDE TECHNICAL SUPPORT AND SERVICES ON ELECTRONIC SYSTEMS AND EQUIPMENTS AND PERFORM OTHER TASKS AS ASSIGNED BY THE COMMANDER, NAVAL ELECTRONIC SYSTEMS COMMAND.

...CURRENT IMPORTANT PROGRAMS

IFF AIMS TEST, EVALUATE, AND CERTIFICATION OF EQUIPMENT/SYSTEMS.
ACLS TEST, EVALUATION, CERTIFICATION OF SHIP SYSTEMS.
COMMUNICATIONS T + E OF SHIPBOARD, SHORE, SATELLITE COMMUNICATIONS.
NAVIGATIONAL AIDS T + E OF TACAN, GCA BEACONS.
RADAR T + E. OF SEARCH, PRECISION TACTICAL RADARS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR FUNCTIONS T+E OF ELECTRONIC EQUIPMENTS/SYSTEMS, DEVELOP SPECIFICATIONS, MONITOR PROCUREMENT SELECT CONTRACT PROPOSALS, PROVIDE CONSULTATION ASSISTANCE WHEN REQUESTED.
MAJOR EQUIPMENTS IFF AIMS, ACLS, TACAN, GCA, RADAR, HF COMMUNICATIONS, SATELLITE COMMUNICATIONS.
FACILITY CAPABILITIES COMPLETE LABORATORY OPERATIONAL, ENVIRONMENTAL TEST AND EVALUATION OF ASSIGNED EQUIPMENTS, SYSTEMS, COMPLETELY EQUIPPED WITH STANDARD AND SPECIAL PURPOSE EQUIPMENT.

INSTALLATION NAVAL ENVIRON PREDICTION RSCH. FACILITY MONTEREY, CAL.

C.O. CDR G.D. HAMILTON

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.000 | 0.686 |
| TOTAL PROCUREMENT | 0.000 | 0.022 |
| TOTAL O+M | 0.000 | 0.002 |
| TOTAL OTHER | 0.000 | 0.077 |
| TOTAL ANNUAL LAB | 0.000 | 0.767 |
| TOTAL INHOUSE | 0.000 | 0.691 |
| TOTAL INHOUSE RDT+E | 0.000 | 0.612 |
| ANNUAL OPERATING COST | 0.000 | 0.845 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 4 | 1 | 3 | 1 |
| CIVILIAN | 20 | 0 | 8 | 12 |
| TOTAL | 24 | 1 | 11 | 13 |

| ACRES | SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET) | | | | COST (MILLION \$) | |
|-------|--|-------|-------|-------|-------------------|-------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 0 | 0.806 | 0.843 | 6.351 | 8.000 | 2.000 | 0.070 |

...MISSION

CONDUCT RESEARCH AND DEVELOPMENT, DIRECTED TOWARDS PROVIDING EFFECTIVE LOCAL AND REGIONAL ENVIRONMENTAL ANALYSIS AND PREDICTION TECHNIQUES AND PROVIDE PLANNING, MODELLING AND EVALUATION SERVICES FOR THE NAVAL WEATHER MODIFICATION PROGRAM.

...CURRENT IMPORTANT PROGRAMS

COMPUTER SIMULATION OF FOG/CLOUD AND PRECIP MICROPHYSICAL PROCESSES.
IMPROVED TYPHOON MOVEMENT PREDICTION TECHNIQUES.
IMPROVED MEDITERRANEAN WEATHER PREDICTION TECHNIQUES.
IMPROVED WEATHER DATA PRESENTATION METHODS.
HYDRODYNAMICAL NUMERICAL MODELLING OF WATER LEVELS AND CURRENTS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCT PROGRAM OF RESEARCH AND DEVELOPMENT IN LOCAL AND REGIONAL ENVIRONMENTAL ANALYSIS AND PREDICTION TECHNIQUES. PROVIDE PLANNING, MODELLING AND EVALUATION SERVICES FOR NAVY WEATHER MODIFICATION PROGRAM. DEVELOP TECHNIQUES AND EQUIPMENT FOR THE INTERPRETATION, DISPLAY, AND APPLICATION OF ENVIRONMENTAL DATA AND INFORMATION AT THE OPERATIONAL LEVEL. MAINTAIN COGNIZANCE OF NAVY REQUIREMENTS AND PROVIDE APPROPRIATE RECOMMENDATIONS FOR APPLICATIONS OF NEW DEVELOPMENTS IN ENVIRONMENTAL SCIENCES WHICH WILL IMPROVE ENVIRONMENTAL SUPPORT TO THE NAVY. MAINTAIN A TECHNICAL LIBRARY OF ENVIRONMENTAL PUBLICATIONS AND INFORMATION. MAINTAIN LABORATORY FOR METEOROLOGICAL ANALYSES AND DRAFTING FACILITIES TO SUPPORT INTERNAL OPERATIONS.

INSTALLATION NAVAL EXPL. ORD. DISPOSAL FAC., INDIAN HEAD, MD.

C.O. CDR BOBBY J. BROWN TECH. DIR. LIONEL A. DICKENSON

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.927 | 1.358 |
| TOTAL PROCUREMENT | 1.990 | 1.944 |
| TOTAL O+M | 0.066 | 0.002 |
| TOTAL OTHER | 0.194 | 0.020 |
| TOTAL ANNUAL LAB | 3.177 | 3.324 |
| TOTAL INHOUSE | 2.283 | 2.074 |
| TOTAL INHOUSE RDT+E | 0.756 | 0.808 |
| ANNUAL OPERATING COST | 0.550 | 0.751 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PROF | |
| MILITARY | 65 | 0 | 3 | 62 |
| CIVILIAN | 132 | 0 | 15 | 117 |
| TOTAL | 197 | 0 | 18 | 179 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|--------|--------|---------|-------------------|-------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 1084 | 33.151 | 17.287 | 70.551 | 120.989 | 4.707 | 1.055 |

...MISSION

CONDUCT RDT+E IN TECHNICAL MATTERS CONCERNING EOD+RENDER SAFE PROCEDURES FOR CONVENTIONAL AND SPECIAL WEAPONS+GUIDED MISSILES,B+C MUNITIONS,TOOLS, EQUIPMENT,TECHNIQUES,US AND FOREIGN AS REQUIRED TO DISCHARGE NAVY RESPONSIBILITIES TO DOD,AF,ARMY IN MATTERS OF EOD

...CURRENT IMPORTANT PROGRAMS

RDT+E EXPLOSIVE ORDNANCE DISPOSAL PROCEDURES
PUBS PROMULGATING DEVELOPMENT STATUS OF EOD EQUIPMENT FOR PROCEDURES
ADVANCED DEVELOPMENT OF EOD EQUIPMENT
IN-SERVICE ENGINEERING FOR EOD EQUIPMENT
ADMINISTER EOD ALLOWANCE LIST FOR PUBS AND EQUIPMENT

...FUNCTIONS/EQUIPMENT/CAPABILITIES

DEVELOP EOD PROCEDURES,TECHNICALLY MANAGE AVAILABILITY OF REQUIRED EOD EQUIPMENT,PREPARE PUBS FOR JOINT SERVICES DEVELOP EQUIPMENT REQUIRED TO PERFORM EOD PROCEDURES.

LIBRARY FOR ORDNANCE DATA,MAGAZINES FOR ORDNANCE STORAGE,FACILITIES FOR ORDNANCE DISASSEMBLY,X-RAY AND RADIOISOTOPE RADIOGRAPHY BUILDING,PHOTO LAB,SURFACE TEST RANGES,UNDERWATER TEST TANK,MAGNETIC EFFECTS FACILITY, MACHINE SHOP,CARPENTER SHOP,ELECTRONIC SHOP

INSTALLATION NAVAL MEDICAL FIELD RESEARCH LAB., CAMP LEJEUNE, N.C.

C.O. CAPT JESSE F. ADAMS

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.700 | 0.868 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.304 | 0.355 |
| TOTAL ANNUAL LAB | 1.004 | 1.223 |
| TOTAL INHOUSE | 1.004 | 1.223 |
| TOTAL INHOUSE RDT+E | 0.700 | 0.868 |
| ANNUAL OPERATING COST | 0.170 | 0.190 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 29 | 7 | 9 | | 20 |
| CIVILIAN | 52 | 3 | 12 | | 40 |
| TOTAL | 81 | 10 | 21 | | 60 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|-------|--------|--------|-------------------|-------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 3 | 28.226 | 8.655 | 15.590 | 52.471 | 0.490 | 0.600 |

...MISSION
CONDUCT R AND D IN MED AND DENT AND ALLIED FIELDS WITH EMPHASIS ON FIELD
AND AMPHIBIOUS MEDICINE

...CURRENT IMPORTANT PROGRAMS
PREV OF HEMOLYSIS CAUSED BY CUSO4 TREAT OF PHOSPHORUS BURNS
PHYSIOLOGIC IMPAIRMENT DUE TO CB PROT CLOTHING IN AMPHIB LANDING
ETIOLOGY OF RESPIRATORY ILLNESS IN MIL PERS
EVALUATION OF FIELD WATER PURIFICATION SYSTEMS
ETIOLOGY OF INFECTIOUS MONONUCLEOSIS

...FUNCTIONS/EQUIPMENT/CAPABILITIES
CONDUCT RESEARCH IN PROBLEMS OF FIELD AND AMPHIBIOUS MEDICINE TEST MED
EQUIP SUPPLIES CLOTHING AND EQUIP FOR MIL PERS USE
APPLIED RESEARCH IN BACTERIOLOGY PHYSIOLOGY STRESS PHYSIOLOGY ENTOMOLOGY
ENVIRON BIOLOGY VIROLOGY FIELD MEDICAL EQUIP BIOCHEM AND ANIMAL INVEST
OLFACTOMETER BLAST FACILITY BALLISTIC RANGE HI SPEED CAMERA LAMINATE
PRESS 2 MAN ENVIRON CHAMBER CLIMATIC CHAMBER MULTIPLEX PHYSIO DATA
RECORDER ELECTRONIC PROGRAMMER FLUOROMETERS RESPIROMETER GAS
PARTITIONER PYRHELIOGRAPH

INSTALLATION NAVAL MEDICAL RESEARCH UNIT NO.1, BERKELEY, CALIF.

C.O. CDR J.W. FRESH

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|----------------------|
| | 1971 (ACTUAL) | 1972 (ACTY + EST) |
| TOTAL RDT+E | 0.039 | 0.049 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.170 | 0.176 |
| TOTAL ANNUAL LAB | 0.209 | 0.225 |
| TOTAL INHOUSE | 0.209 | 0.225 |
| TOTAL INHOUSE RDT+E | 0.039 | 0.049 |
| ANNUAL OPERATING COST | 0.001 | 0.002 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 16 | 3 | 7 | 9 |
| CIVILIAN | 3 | 0 | 1 | 2 |
| TOTAL | 19 | 3 | 8 | 11 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|-------|-------|-------|-------------------|-------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.296 |

...MISSION

RESEARCH ON AIRBORNE INFECTIOUS DISEASES DIRECT SUPPORT OF LO TEMP PROJ
DEV OF AEROSOL HAZARD CONTROL IN DENTAL CLINICS

...CURRENT IMPORTANT PROGRAMS

STUDIES ON ENVIRONMENTAL CONTROL OF RESPIRATORY DISEASE AGENTS
LO TEMP EFFECTS ON SUSCEPTIBILITY TO AIRBORNE INFECTIONS
POTENTIAL AEROSOL HAZARDS DURING DENTAL OPERATORY PROCEDUR
STUDY OF INFECTIONS IN HYPERBARIC CONDITIONS
POTENTIAL DISEASE HAZARDS TO NAVY DIVERS AND AQUANAUTS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

BACTERIOLOGY MYCOLOGY BIOPHYSICS AND OTHER APPROPRIATE FIELDS RELATIVE
TO PARTICULAR PROBLEMS OF AIRBORNE DISEASES OF MIL IMPORTANCE STUDY OF
PROTEIN ELECTROLYTE LIVER CARDIOPULMONARY AND OTHER FACTORS IN HOST RES
PONSE TO INFECTION IMMUNOLOGIC AND PHYSIOLOGIC SUTDIES ON A MENINGITI-
DIS TEST AND IMPROVE PLAGUE VACCINE REFERENCE STANDARDS STUDIES ON
PATH AND IMMUNITY OF DISEASES DEV RAPID DIAG PROC FOR ARBO AND RESPIRA-
STORY VIRUSES
STUDY OF OCEAN POLLUTION RELATIVE TO NAVAL TECHNICAL PROGRAMS

INSTALLATION NAVAL MEDICAL RESEARCH UNIT NO.2, TAIPEI, TAIWAN

C.O. CAPT R.H. WATTEN CHIEF SCIENTIST R.R. BLACKWELL

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 1.376 | 1.335 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.600 | 0.519 |
| TOTAL ANNUAL LAB | 1.976 | 1.854 |
| TOTAL INHOUSE | 1.976 | 1.854 |
| TOTAL INHOUSE RDT+E | 1.376 | 1.335 |
| ANNUAL OPERATING COST | 0.512 | 0.542 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 36 | 11 | 16 | | 20 |
| CIVILIAN | 10 | 2 | 3 | | 7 |
| TOTAL | 46 | 13 | 19 | | 27 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|--------|-------|--------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 2 | 65.332 | 21.800 | 0.600 | 87.732 | 0.000 | 0.781 |

...MISSION

CONDUCT BASIC RESEARCH IN BIOMED SCIENCE PROVIDE DATA ON DISEASES AND
MED PROBLEMS OF MIL SIGNIFICANCE RECOMMEND CONTROL MEASURES AND PROVIDE
TRNG IN R AND D TECHNIQUE

...CURRENT IMPORTANT PROGRAMS

SURVEILLANCE OF INFLUENZA IN FAR EAST
STUDIES OF FEVERS OF UNK ORIGIN
EPIDEMIOLOGY PATH AND TREATMENT OF PHILIPPINE CAPILLARIASIS
STUDY OF DISEASES OF MIL IMPORTANCE IN INDONESIA
NUTRITION METABOLIC AND BIOCHEM STUDIES OF FAR EAST ETHNIC

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CLINICAL STUDY OF DIAG AND TREATMENT OF TROPICAL DISEASE AND EPIDEMIOLO-
GICAL STUDY OF INFECTIOUS DISEASE COMPLETE RADIOISOTOPE EQUIP COMPUTER
CAPABILITY IN CLINICAL INVESTIGATION MICROBIOLOGY MED PHYSICS MED ECO-
LOGY BIOCHEM PATH ANIMAL FACILITY

INSTALLATION NAVAL MEDICAL RESEARCH UNIT NO.3, CAIRO, EGYPT

C.O. CAPT H. SPARKS SENIOR SCIENTIST DR. H. HOGGSTRAAL

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 1.078 | 0.949 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.360 | 0.392 |
| TOTAL ANNUAL LAB | 1.438 | 1.341 |
| TOTAL INHOUSE | 1.438 | 1.341 |
| TOTAL INHOUSE RDT+E | 1.078 | 0.949 |
| ANNUAL OPERATING COST | 0.300 | 0.310 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 30 | 7 | 9 | 21 |
| CIVILIAN | 111 | 15 | 44 | 67 |
| TOTAL | 141 | 22 | 53 | 88 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|--------|--------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 5 | 43.420 | 6.610 | 16.437 | 66.467 | 2.606 | 0.000 |

...MISSION
RESEARCH INTO ETIOLOGY ECOLOGY DISTRIBUTION TRANSMISSION PATHOGENESIS
PREVENTION CONTROL AND TREATMENT OF INFECTIOUS AND ENCEMIL DISEASE OF
MIL MED INTEREST IN MIDEAST AND AFRICA

...CURRENT IMPORTANT PROGRAMS
PATHOPHYSIOLOGY OF LOUSE BORNE RELAPSING FEVER
IMMUNOLOGY AND ETIOLOGY OF MALARIA IN ETHIOPIA
PATHOPHYSIOLOGY AND THERAPY OF SCHISTOSOMIASIS
ELUCIDATE ROLE OF TICKS AS HUMAN DISEASE VECTOR
ECOLOGY ARBOVIRUS INCLUDING YELLOW FEVER IN ETHIOPIA

...FUNCTIONS/EQUIPMENT/CAPABILITIES
ARBOVIRUS LAB ANIMAL PRODUCTION FACILITIES NUTRITIONAL BIOCHEM TICK
BIOCHEM AND PHYSIOLOGY MEDICAL ZOOLOGY AND ENTOMOLOGY CLINICAL INVEST
AND MEDICAL WARDS RICKETTSIOLOGY TISSUE CULTURE FACILITIES MENINGO-
COCCUS AND ENTERIC BACILLI LAB VETERINARY PATHOLOGY PARASITOLOGY
EXPERIMENTAL AND ANATOMIC PATHOLOGY

INSTALLATION NAVAL MEDICAL RESEARCH UNIT NO.4, GREAT LAKES, ILL
C.O. CAPT R.O. PECKINPAUGH

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.797 | 0.752 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.454 | 0.385 |
| TOTAL ANNUAL LAB | 1.251 | 1.137 |
| TOTAL INHOUSE | 1.251 | 1.137 |
| TOTAL INHOUSE RDT+E | 0.797 | 0.752 |
| ANNUAL OPERATING COST | 0.330 | 0.349 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 34 | 6 | 12 | 22 |
| CIVILIAN | 45 | 2 | 14 | 31 |
| TOTAL | 79 | 8 | 26 | 53 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|--------|--------|--------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 1 | 28.702 | 11.576 | 13.649 | 53.927 | 0.387 | 0.397 |

...MISSION

CONDUCT R AND D IN BIOMED SERVICES PROVIDE DATA ON DISEASE AND MED PROBLEMS OF MIL IMPORTANCE RECOMMEND CTRL MEASURES FOR COMMUNICABLE DISEASE PROVIDE TRAINING IN RESEARCH TECHNIQUES

...CURRENT IMPORTANT PROGRAMS

MYCOPLASMAS ASSOCIATED WITH RESPIRATORY DISEASE AND BRONCHOPNEUMONIA
ETIOLOGIC AGENTS OF RESPIRATORY DISEASE IN RECRUITS
HOST STUDIES OF ILLNESS SUSCEPTIBILITY
EVAL ANTIBACTERIAL AGENTS TO ELIMINATE MENINGOCOCCI IN NASOPHARYNX
EVAL VARIOUS INFLUENZA VACCINE IN RECRUITS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

RESEARCH IN ETIOLOGY TRANSMISSION CONTROL AND TREATMENT OF COMMUNICABLE RESPIRATORY DISEASE AID MED ACTIVITIES IDENTIFY EPIDEMIC RESPIRATORY DISEASES STUDY MED PROBLEMS OF RECRUIT TRAIN PERS IN R AND D TECHNIQUE EQUIP-INCUBATORS REFRIGERATION UNITS ULTRACENTRIFUGE LIQUID SCINTILLATION SYSTEM OSCILLATOR SPECTROPHOTOMETERS ELECTRON SCOPE RESEARCH IN ECOLOGY AND CONTROL OF COMMUNICABLE DISEASE MICROPLASMA BACTERIOLOGY BIOCHEM BIOMETRIC EPIDEMIOLOGY IMMUNOLOGY AND VIROLOGY

INSTALLATION NAVY MED. NEUROPSYCHIATRIC RES. UNIT, SAN DIEGO, CAL.

C.O. CAPT R.J. ARTHUR SCIENTIFIC DIR. DR. W. WILKINS

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.890 | 1.015 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.239 | 0.304 |
| TOTAL ANNUAL LAB | 1.129 | 1.319 |
| TOTAL INHOUSE | 1.129 | 1.319 |
| TOTAL INHOUSE RDT+E | 0.890 | 1.015 |
| ANNUAL OPERATING COST | 0.150 | 0.200 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 10 | 9 | 10 | | 0 |
| CIVILIAN | 52 | 8 | 21 | | 31 |
| TOTAL | 62 | 17 | 31 | | 31 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|-------|--------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | TOTAL | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | | | |
| 0 | 11.177 | 4.500 | 0.000 | 15.677 | 2.000 | 0.221 |

...MISSION
CONDUCT NEUROPSYCHIATRY RESEARCH AS APPLIES TO NAVAL SERVICE

...CURRENT IMPORTANT PROGRAMS
LIFE STRESS AND HEART DISEASE IN HEALTHY NAVY OFFICERS + PETTY OFFICERS
STRESS TOLERANCE DIFFERENCES AMONG NAVAL PERSONNEL
DEVELOP COMPUTERIZED PSYCHIATRIC DATA SYSTEM FOR NAVAL SERVICE
GUIDELINES FOR PSYCHIATRIC TREATMENT AND DISPOSITION OF NAVAL PERSONNEL
PHYSICAL FITNESS STANDARDS PREDICTING MILITARY EFFECTIVENESS

...FUNCTIONS/EQUIPMENT/CAPABILITIES
ANALYSIS OF UNDERWATER PSYCHOPHYSIO PROGRAMS AND TASKS
COMPLETE EEG COMBINED USE FOR SINGLE SEIZURE STUDY AND SLEEP DEPRIVATION
ON-LINE EEG RECORDING CAPABILITIES

INSTALLATION NAVAL MISSILE CENTER, POINT MUGU, CALIF.

C.O. CAPT EDELBERT E. IRISH TECH. DIR. DONALD F. SULLIVAN

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 22.823 | 32.629 |
| TOTAL PROCUREMENT | 19.715 | 11.354 |
| TOTAL O+M | 8.243 | 13.282 |
| TOTAL OTHER | 7.123 | 9.429 |
| TOTAL ANNUAL LAB | 57.904 | 66.694 |
| TOTAL INHOUSE | 44.726 | 54.030 |
| TOTAL INHOUSE RDT+E | 16.070 | 24.472 |
| ANNUAL OPERATING COST | 1.200 | 14.895 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 704 | 3 | 105 | | 599 |
| CIVILIAN | 1698 | 7 | 506 | | 1192 |
| TOTAL | 2402 | 10 | 611 | | 1791 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|---------|---------|---------|-------------------|--------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 4 | 110.756 | 160.569 | 698.391 | 969.716 | 22.024 | 36.058 |

...MISSION

TO PERFORM TEST, EVALUATION, DEVELOPMENT SUPPORT AND EXERCISE ENGINEERING COGNIZANCE AS ASSIGNED OF NAVAL WEAPONS, WEAPON SYSTEMS AND RELATED DEVICES

...CURRENT IMPORTANT PROGRAMS

F-14A/PHOENIX DEVELOPMENT TESTING
AIRBORNE ELECTRONIC COUNTERMEASURES R + D
ENGINEERING COGNIZANCE OF AIR LAUNCHED WEAPONS
AIR-TO-AIR, AIR-TO-SURFACE MISSILE PRODUCTION TESTING
T AND E OF AERIAL AND SURFACE TARGETS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PERFORM TESTS AND CONDUCT TECH EVALUATIONS OF NAVAL AIRBORNE WEAPON SYS
GUIDED MISSILE SUBSYSTEMS AND RELATED SUPPORT EQUIP PERFORM BIS TRIALS
FOR INTEGRATED AIRBORNE WEAPON SYS PERFORM PROD MONITORING TESTS OF NEW
GUIDED MISSILE LOTS PROVIDE ENG COGNIZANCE AND FIELD ENG SERVICES ON
ASSIGNED OPERATIONAL AIRBORNE WEAPONS AND TARGETS SYSTEMS PROVIDE ENG-
INEERING MANAGEMENT AND SUPPORT FOR EW EQUIP DURING DEV AND DEPLOYMENT
PERFORM DEV, T + E OF AIRBORNE AND SURFACE TARGET SYSTEMS. MAJOR FAC0
TEST OPERATIONS FAC, LABORATORY FAC INCL ENVIRONMENTAL FAC RADAR REF-
LECTIVITY FAC ROCKET ENGINE TEST FAC INTEGRATED SYSTEMS SIMULATION FAC
TARGET FAC, PHOTOGRAPHICS FAC INFRARED LASER AND OPTICS LAB

INSTALLATION PACIFIC MISSILE RANGE, POINT MUGU, CALIF.

C.O. RADM H.S. MOORE TECH. DIR. W.L. MILLER

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 63.569 | 68.575 |
| TOTAL PROCUREMENT | 1.933 | 2.000 |
| TOTAL O+M | 5.605 | 5.760 |
| TOTAL OTHER | 9.499 | 17.335 |
| TOTAL ANNUAL LAB | 80.606 | 93.678 |
| TOTAL INHOUSE | 54.160 | 62.932 |
| TOTAL INHOUSE RDT+E | 43.337 | 44.945 |
| ANNUAL OPERATING COST | 22.493 | 23.205 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|----------------|---------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 865 | 6 | 183 | | 682 |
| CIVILIAN | 3058 | 7 | 460 | | 2598 |
| TOTAL | 3923 | 13 | 643 | | 3280 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|---------|----------|----------|-------------------|---------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | TOTAL | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | | | |
| 29600 | 93.463 | 271.479 | 1390.796 | 1755.738 | 138.800 | 162.700 |

...MISSION

TO PROVIDE SUPPORT FOR THE DEPARTMENT OF DEFENSE AND OTHER DESIGNATED GOVERNMENT AGENCIES FOR LAUNCHING, TRACKING, + COLLECTING DATA IN GUIDED MISSILE, SATELLITE, + SPACE VEHICLE RESEARCH, DEVELOPMENT, EVALUATION, AND TRAINING PROGRAMS AND ACTUAL OPERATIONS.

...CURRENT IMPORTANT PROGRAMS

RANGE SUPPORT OF 240 NATIONAL RANGE USER PROGRAMS INCL PHOENIX + POLARIS
DEV OF UNDERWATER TEST + EVAL RANGE IN HAWAIIAN AREA FOR ASW WEAPONS
DEV EXTENDED AREA TRACKING SYSTEM OVER-THE-HORIZON IN CONUS AREA
DEV OF INTEGRATED TARGET CONTROL SYSTEM ITCS FOR CONUS SITES
DEV OF AIR COMBAT MANEUVERING TEST SYSTEM ACMTS FOR TACT WPN SYS EVAL

...FUNCTIONS/EQUIPMENT/CAPABILITIES

OPERATE NAT L RANGE FACIL AT PT MUGU CAL/SAN NICOLAS IS/KAUAI HAW/MIDWAY IS/WAKE IS/JOHNSTON IS. OPERATE UNDERWATER RANGE/KAUAI. OPERATE RANGE INSTR SHIP USNS WHEELING TAGM-8 AND 5 RANGE INSTR AIRCRAFT EC-121K.
PROVIDE TRAJECTORY DATA, TELEMTRY, COMMAND CONTROL/DESTRUCT, COMM SVCS, DATA RELAY AND DISPLAY FOR CONTROL, DATA PROCESSING, ITEM RECOVERY AT SEA, TECH SVCS CALIB/REPAIR/INSTALL/MAINT, METRO + CCEANO SVCS, FREQ PROTECTION, NAVIG AIDS, LOGISTICS + BASE SUPPORT. MAJOR OP CONTROL SITES AT CONUS + BARKING SANDS, DATA PROC CENTER PT MUGU. PROBE LAUNCH COMPLEX AT PT MUGU, SAN NICOLAS IS, + KAUAI. UNDERWATER RANGE KAUAI IS 5 X 10 MI WITH 37 HYDORPHONES AT 400-1000 FATHOMS. INSTRUMENTED AREAS 0 CONUS-100 X 200 MI/HAW AREA-50 X 100 MI/JOHNSTON-100 MI RADIUS. AREA FREQ COORD JCS AT CONUS AND HAW AREA. SPEC HYDROACOUSTIC ARRAY OAHU/MIDWAY/WAKE.

INSTALLATION NAVAL ORDNANCE LABORATORY, WHITE OAK, MD.

C.O. CAPT ROBERT WILLIAMSON II TECH. DIR. DR. GREGORY K. HARTMANN

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 51.384 | 69.994 |
| TOTAL PROCUREMENT | 14.909 | 10.548 |
| TOTAL O+M | 2.619 | 1.729 |
| TOTAL OTHER | 8.045 | 5.233 |
| TOTAL ANNUAL LAB | 76.957 | 87.504 |
| TOTAL INHOUSE | 57.295 | 52.887 |
| TOTAL INHOUSE RDT+E | 34.988 | 38.078 |
| ANNUAL OPERATING COST | 20.438 | 22.433 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 52 | 1 | 28 | 24 |
| CIVILIAN | 2847 | 121 | 1107 | 1740 |
| TOTAL | 2899 | 122 | 1135 | 1764 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|---------|----------|----------|-------------------|--------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 1059 | 311.167 | 182.543 | 1019.410 | 1513.120 | 46.207 | 32.595 |

...MISSION

TO CONDUCT A PROGRAM OF WARFARE ANALYSIS, RESEARCH, DESIGN, DEVELOPMENT, TEST, EVALUATION, SYSTEMS INTEGRATION AND FLEET SUPPORT PRINCIPALLY IN THE AREAS OF SURFACE AND UNDERSEA WARFARE AND TO CONDUCT INVESTIGATIONS INTO RELATED FIELDS OF SCIENCE AND TECHNOLOGY

...CURRENT IMPORTANT PROGRAMS

TORPEDO MK 48-1 DEVELOPMENT
CAPTOR DEVELOPMENT
HIGH ENERGY LASER RESEARCH AND DEVELOPMENT
NUCLEAR WEAPON EFFECTS RESEARCH INCLUDING VULNERABILITY AND HARDENING
REENTRY VEHICLES MATERIALS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

WIND TUNNELS TO MACH 20 BALLISTICS RANGES FOR FREE FLIGHT MODEL STUDIES, HYDROBALLISTIC TANK 1.75 MILLION GALLON CAPACITY FOR STUDY OF RELATIVELY LARGE MODELS AT HIGH SPEED ENTRY, CENTRIFUGE TO STUDY U/W EXPLOSIONS FACILITIES FOR TESTING AND RESEARCH IN THE CHEMISTRY OF EXPLOSIVES AND PROPELLANTS EXTENSIVE LABORATORY AND FIELD FACILITIES FOR TESTING ORDNANCE UNDER NATURAL AND/OR SIMULATED CONDITIONS
MAGNETIC STRUCTURE FACILITY TO STUDY MAGNETIC CHARACTERISTICS OF SUBMARINES, SHIPS AND SATELLITES HIGH-ARC FACILITY CDC 6400 COMPUTER

INSTALLATION NAVAL ORD. MISSILE TEST FAC., WHITE SANDS, N. MEX.

C.O. CAPT H.E. DAVIES, JR. CHIEF ENG. DR. W.W. BCHN

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 1.705 | 1.218 |
| TOTAL PROCUREMENT | 0.725 | 0.776 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 1.606 | 1.544 |
| TOTAL ANNUAL LAB | 4.036 | 3.538 |
| TOTAL INHOUSE | 3.681 | 3.322 |
| TOTAL INHOUSE RDT+E | 1.609 | 1.131 |
| ANNUAL OPERATING COST | 0.812 | 0.852 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 185 | 2 | 21 | | 164 |
| CIVILIAN | 86 | 1 | 4 | | 82 |
| TOTAL | 271 | 3 | 25 | | 246 |

| ACRES | SPACE AND PROPERTY OF SQUARE FEET | | | | COST (MILLION \$) | |
|-------|--------------------------------------|--------|---------|---------|-------------------|-------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 112 | 84.742 | 30.719 | 236.239 | 351.700 | 6.590 | 3.312 |

...MISSION
SUPPORT THE NAVY GUIDED MISSILE AND ROCKET PROGRAM INCLUDING GROUND AND
FLIGHT TESTING PARTICIPATE IN THE OPERATION OF THE DEPT OF DEFENSE
INTEGRATED MISSILE TEST RANGE AT WHITE SANDS

...CURRENT IMPORTANT PROGRAMS
STANDARD MISSILE 2 SLANT AEGIS

...FUNCTIONS/EQUIPMENT/CAPABILITIES
FLIGHT TEST TALOS TERRIER TARTAR STANDARD SURFACE TO AIR GUIDED MISSILES
FLIGHT TEST STANDARD ANTI RADIATION MISSILE AIR TO SURFACE
LAUNCH AEROBEE 150 170 AND 350 SOUNDING ROCKETS FOR UPPER ATMOS STUDY
CONDUCT NAVY AIR WEAPON BOMB TESTS
CONDUCT FEASIBILITY TEST FOR LOW ALTITUDE SUPERSONIC TARGET
CONDUCT TESTS OF CLOSE IN WEAPON SYSTEM

INSTALLATION NAVAL PERSONNEL RESEARCH ACTIVITY, SAN DIEGO, CALIF.

C.O. CDR KARL E. KUEHNER TECH. DIR. DR. I. JONES

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 3.204 | 3.933 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.055 | 0.051 |
| TOTAL OTHER | 0.518 | 0.525 |
| TOTAL ANNUAL LAB | 3.777 | 4.509 |
| TOTAL INHOUSE | 3.777 | 4.309 |
| TOTAL INHOUSE RDT+E | 3.204 | 3.733 |
| ANNUAL OPERATING COST | 0.360 | 0.365 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 35 | 0 | 35 | | 0 |
| CIVILIAN | 163 | 30 | 99 | | 64 |
| TOTAL | 198 | 30 | 134 | | 64 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|-------|-------|--------|-------------------|-------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 1 | 47.300 | 4.900 | 0.000 | 52.200 | 0.210 | 0.277 |

...MISSION

PLANS AND CONDUCTS RESEARCH AND DEVELOPMENT IN PERSONNEL OPERATIONS AND BEHAVIORAL SCIENCES TO DEVELOP NEW CONCEPTS AND IMPROVED METHODS FOR ACQUIRING, CLASSIFYING, TRAINING, DISTRIBUTING, AND RETAINING PERSONNEL AND FOR MAXIMIZING THE UTILIZATION OF NAVY MANPOWER RESOURCES.

...CURRENT IMPORTANT PROGRAMS

INSTRUCTIONAL DESIGN AND EXPERIMENTAL TRAINING
COMPUTERIZED MANPOWER MANAGEMENT RESEARCH
COMPUTER BASED TRAINING AND PERFORMANCE EVALUATION
HUMAN FACTORS IN PERSONNEL AND TRAINING
PERSONNEL MEASUREMENT, CLASSIFICATION, ASSIGNMENT, AND RETENTION

...FUNCTIONS/EQUIPMENT/CAPABILITIES

IBM 1500 COMPUTER ASSISTED INSTRUCTION SYSTEM
IBM 1130 DATA PROCESSING COMPUTER SYSTEM WITH REMOTE JOB ENTRY CAPABILITY TO A IBM 360/65 LOCATED AT THE NAVY ELECTRONICS LABORATORY CENTER
OPTICAL SCANNER
EXPERIMENTAL TESTING AND TRAINING FACILITIES
OPTICAL SCANNING CAPABILITY

INSTALLATION NAVAL PERSONNEL RSCH AND DEVELOPMENT LAB, WASH., D. C.

C.O. CAPT A.L. BLANKS TECH. DIR. E.M. RAMRAS

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 2.529 | 3.074 |
| TOTAL PROCUREMENT | 0.194 | 0.320 |
| TOTAL O+M | 0.789 | 0.353 |
| TOTAL OTHER | 0.288 | 0.528 |
| TOTAL ANNUAL LAB | 3.800 | 4.275 |
| TOTAL INHOUSE | 3.800 | 4.275 |
| TOTAL INHOUSE RDT+E | 2.529 | 3.074 |
| ANNUAL OPERATING COST | 0.579 | 0.654 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 43 | 0 | 43 | | 0 |
| CIVILIAN | 230 | 8 | 150 | | 80 |
| TOTAL | 273 | 8 | 193 | | 80 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|-------|--------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 0 | 22.156 | 2.703 | 1.420 | 26.279 | 2.652 | 0.400 |

...MISSION
CONDUCT RESEARCH DEVELOPMENT TEST EVALUATION BEHAVIOR AND SOCIAL
SCIENCES AND RELATED FIELDS DIRECTED TOWARD NEW AND IMPROVED PERSONNEL
AND MANPOWER SYSTEMS TECHNIQUES AND OPERATIONS

...CURRENT IMPORTANT PROGRAMS
ENLISTED OCCUPATIONAL DATA BANK
ENLISTED ELECTRONIC CAREER STRUCTURES
FACTORS AFFECTING RETENTION OF ENLISTED MEN
MANPOWER ALLOCATION AND PRODUCTIVITY MODEL
METHODS FOR SELECTION VIETNAM ADVISORS

...FUNCTIONS/EQUIPMENT/CAPABILITIES
OCCUPATIONAL RESEARCH CAREER STRUCTURES MAN MACHINE SYSTEMS MANPOWER
REQUIREMENTS ORGANIZATIONAL EFFECTIVENESS RECRUITMENT PROCUREMENT
MANPOWER PERSONNEL COSTS ATTITUDES MOTIVATION SIMULATION MODELING
RCA 301 COMPUTER IBM 1050 DATA LINK TERMINAL OPSCAN 100

INSTALLATION NAVAL RESEARCH LABORATORY, WASHINGTON, D.C.

DIR. CAPT EARLE W. SAPP DIR. OF RESEARCH DR. ALAN BERMAN

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 96.161 | 111.202 |
| TOTAL PROCUREMENT | 11.305 | 10.050 |
| TOTAL O+M | 1.607 | 0.915 |
| TOTAL OTHER | 3.218 | 2.313 |
| TOTAL ANNUAL LAB | 112.291 | 124.480 |
| TOTAL INHOUSE | 106.830 | 123.083 |
| TOTAL INHOUSE RDT+E | 90.700 | 109.797 |
| ANNUAL OPERATING COST | 24.007 | 26.787 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 88 | 3 | 11 | 77 |
| CIVILIAN | 3705 | 376 | 1456 | 2249 |
| TOTAL | 3793 | 379 | 1467 | 2326 |

| ACRES | SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET) | | | | COST (MILLION \$) | |
|-------|--|---------|---------|----------|-------------------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 2049 | 1544.718 | 182.791 | 645.856 | 2373.365 | 76.107 | 58.124 |

...MISSION
TO CONDUCT SCIENTIFIC RESEARCH AND DEVELOPMENT IN THE PHYSICAL SCIENCES
AND RELATED FIELDS DIRECTED TOWARD NEW AND IMPROVED MATERIALS,
EQUIPMENT, TECHNIQUES, AND SYSTEMS FOR THE NAVY

...CURRENT IMPORTANT PROGRAMS
HIGH ENERGY LASER GENERATION, PROPAGATION, AND DAMAGE PROGRAM
ANTI-SURFACE-SHIP MISSILE DEFENSE PROGRAM
HIGH ALTITUDE EXPLOSION REACTION MODELING AND SIMULATION PROGRAM
ADVANCED ACOUSTIC ANTI-SUBMARINE WARFARE SURVEILLANCE PROGRAM
SATELLITE SPACE SURVEILLANCE PROGRAMS

...FUNCTIONS/EQUIPMENT/CAPABILITIES
PRINCIPAL PHYSICAL SCIENCE RESEARCH LABORATORY OF THE NAVY. MAJOR
AREAS ARE ELECTRONICS- INCL. RADAR, COMMUNICATIONS, ELECTRONIC WARFARE,
CHEMISTRY, METALLURGY, OPTICAL, PLASMA, AND NUCLEAR SCIENCES, SPACE
SCIENCE, TECHNOLOGY, AND SYSTEMS, MATHEMATICS, ACOUSTICS, OCEANOLOGY. AS
THE CORPORATE LABORATORY OF THE NAVY, NRL IS RESPONSIBLE FOR MAINTAINING
A PROGRAM ON THE CUTTING EDGE OF RESEARCH FROM WHICH EVOLVES NEW TECH-
NIQUES AND EQUIPMENT. MAJOR FACILITIES INCLUDE TWO SHIPS FOR ACOUSTIC
ASW RESEARCH, OCEANOGRAPHY, AND DEEP OCEAN RESEARCH. MAJOR ACOUSTIC
STANDARD AND CALIBRATION FACILITIES. HIGH LEVEL RADIATION LABORATORY.
THREE NUCLEAR PARTICLE ACCELERATORS. HIGH ENERGY LASER FACILITY. SPACE
SIMULATION FACILITIES.

INSTALLATION NAVAL SHIP RESEARCH AND DEVELOPMENT CTR., WASH., D.C.

C.O. CAPT R.W. KING TECH. DIR. DR. A. POWELL

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 87.709 | 93.764 |
| TOTAL PROCUREMENT | 2.890 | 1.751 |
| TOTAL O+M | 11.232 | 11.043 |
| TOTAL OTHER | 15.140 | 19.603 |
| TOTAL ANNUAL LAB | 116.971 | 126.161 |
| TOTAL INHOUSE | 78.330 | 81.551 |
| TOTAL INHOUSE RDT+E | 58.181 | 61.195 |
| ANNUAL OPERATING COST | 24.686 | 27.784 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 177 | 6 | 40 | | 137 |
| CIVILIAN | 3581 | 113 | 1449 | | 2132 |
| TOTAL | 3758 | 119 | 1489 | | 2269 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|---------|----------|----------|-------------------|--------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 975 | 559.910 | 203.006 | 1779.348 | 2542.264 | 79.474 | 49.842 |

...MISSION

TO CONDUCT A PROGRAM OF ANALYSIS, R D T AND E, SYSTEMS INTEGRATION, FLEET ENGINEERING SUPPORT IN NAVAL SHIP SYSTEMS, AND TO CONDUCT INVESTIGATIONS INTO RELATED FIELDS OF SCIENCE AND TECHNOLOGY.

...CURRENT IMPORTANT PROGRAMS

TECHNOLOGY OF NAVAL CATAMARANS. ADVANCED SUBMARINES - CONTROL, SILENCING PROPULSION, AND STRUCTURES. DEVELOPMENT OF LARGE, HIGH PERFORMANCE HYDROFOIL SHIPS. CIRCULATION CONTROL ROTORS FOR HELICOPTERS. SHIPBOARD POLLUTION ABATEMENT. DETECTION AND CLASSIFICATION OF UNDERWATER OBJECTS INCLUDING BURIED MINES.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PLAN AND CONDUCT R D T AND E AND PROVIDE SUPPORT TO THE OPERATING FORCES AND NAVAL AND GOVERNMENT AGENCIES AS ASSIGNED IN THE AREAS OF HYDROMECHANICS, AERODYNAMICS, STRUCTURAL MECHANICS + MATERIAL, APPLIED MATHEMATICS, ACOUSTICS AND VIBRATIONS, SUBSURFACE, SURFACE, AND AIRBORNE MINE DEFENSE, ACOUSTIC + TORPEDO COUNTERMEASURES, INSHORE WARFARE, SHIPS ATMOSPHERE CONDITIONING + POLLUTION CONTROL, SHIP ELECTRICAL SYSTEMS, AND SHIPBOARD MACHINERY SYSTEMS. FACILITIES INCLUDE BALLAST BLOW TEST FACILITY MAIN SEAWATER PIPING SYSTEM FACILITY COMPUTER FACILITIES MAN-RATED OCEAN SIMULATION FACILITY HIGH SPEED, DEEP AND SHALLOW WATER, MANEUVERING-SEAKEEPING, AND ROTATING ARM TOWING BASINS SUBSONIC, TRANSONIC, SUPERSONIC, AND HYPERSONIC WIND TUNNELS ACOUSTIC DATA ANALYSIS CENTER ANECHOIC FLOW FACILITY AND STRUCTURAL RESEARCH FACILITIES.

INSTALLATION NAVY SPACE SYSTEMS ACTIVITY, LOS ANGELES, CALIF.

C.O. CAPT DOC G. FAULKNER, JR.

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 6.045 | 5.023 |
| TOTAL PROCUREMENT | 1.680 | 1.300 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.228 | 0.228 |
| TOTAL ANNUAL LAB | 7.953 | 6.551 |
| TOTAL INHOUSE | 0.858 | 0.979 |
| TOTAL INHOUSE RDT+E | 0.630 | 0.751 |
| ANNUAL OPERATING COST | 0.000 | 32.200 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 28 | 1 | 14 | 14 |
| CIVILIAN | 38 | 1 | 20 | 18 |
| TOTAL | 66 | 2 | 34 | 32 |

| ACRES | SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET) | | | | COST (MILLION \$) | |
|-------|--|-------|-------|-------|-------------------|-------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 0 | 0.000 | 6.000 | 0.000 | 6.000 | 0.000 | 0.025 |

...MISSION

PROVIDE ENGR COMPETENCE + MGMT FOR DEVELOPMT OF ASSGND SPA SYS RESPONS-
IVE TO RQRMTS OTHER NAVACTS PROVIDE GUIDANCE TO NAVAIRSYSCOMHQS ON
SCOPE + CONTENT OF ADV STUDY, RESRCH + EXPLOR PROG PERFORM MGMT + ENGR
FUNCTIONS RELATED TO JTSVCSPASYS DEVELOPMT COORD WITH USAF SAMSO.

...CURRENT IMPORTANT PROGRAMS

PROJECT 749
PROJECT READOUT
FLEET SATELLITE COMMUNICATIONS SYSTEM
SPACE TEST PROGRAM
SATELLITE APPLICATION FOR SEARCH AND RESCUE

...FUNCTIONS/EQUIPMENT/CAPABILITIES

INITIATE PLAN + EXECUTE SPACE PROJECTS AS ASSIGNED
PRODUCE TECH COST + EFFECT STUDIES + ASSOC ENGR MGMT + FINAN PLANS
RESP MISSION AREAS NAVY PARTICIPATES AS MBR JOINT-SVC EFFORT
COORD ASSOCIATED NAVY SPT EFFORT TO DOD + DOD-NASA SPACE-RELATED PROG
ACT AS FOCAL POINT FOR NAVY SPACE EXPERIMENTS
ACT AS SINGLE POINT OF CONTACT WITH USAF SAMSO FOR ALL SPACE MATTERS
COORD SPT PROVIDED BY OTHER NAVACTS TO AREAS NSSA RESPONSIBLE

INSTALLATION NAVAL SUBMARINE MED. RSCH LAB, NEW LONDON, GROTON, CTNN
C.O. CDR J. BLOOM SCIENTIFIC DIR. DR. C.F. GELL

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 1.160 | 1.451 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.287 | 0.362 |
| TOTAL ANNUAL LAB | 1.447 | 1.813 |
| TOTAL INHOUSE | 1.447 | 1.813 |
| TOTAL INHOUSE RDT+E | 1.160 | 1.451 |
| ANNUAL OPERATING COST | 0.620 | 0.685 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 25 | 8 | 14 | | 11 |
| CIVILIAN | 55 | 11 | 38 | | 17 |
| TOTAL | 80 | 19 | 52 | | 28 |

| ACRES | SPACE AND PROPERTY SPACE (THOUSANDS OF SQUARE FEET) | | | | COST (MILLION \$) | |
|-------|--|--------|--------|--------|-------------------|-------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 0 | 27.160 | 10.382 | 18.279 | 55.821 | 0.000 | 1.250 |

...MISSION

LONGITUDINAL HEALTH STUDY OF SUB AND DIVING PERS
RESEARCH PHYSIO EFFECTS OF EXPOSURE TO INCREASED CO2 AND O2 IN HYPER-
BARIC ENVIRONMENT

...CURRENT IMPORTANT PROGRAMS

STUDY UNDERWATER ENVIRON ON HEARING IN DIVERS
STUDY EFFECTS OF MIXED BREATHING GASES ON SPEECH IN DIVERS
STUDY EPIDEMIOLOGIC RELATIONSHIP OF AEROSOLS IN SUBMARINES
TEST SUBMARINE ESCAPE SUIT
FIELD STUDIES OF UNDERWATER VISION AND COLOR VISION

...FUNCTIONS/EQUIPMENT/CAPABILITIES

DEV SENSORY AIDS FOR UNDERWATER COMMUNICATIONS DEV AND EVAL SUB AND
DIVING SAFETY EQUIP LONGRANGE TOX STUDIES IN SUB ENVIRON HYPERBARIC
CHAMBER AS CLINICAL TREATMENT DEVICE USE OF VISUAL EVOKED CORTICAL
POTENTIALS AS EARLY INDICATORS OF PERFORMANCE DECREMENT WCRK PHYSIOLOGY
RELATED TO DIVING AND SUBS BIOCHEM CORRELATES OF COLD EXPOSURE STRESS

INSTALLATION NAVY TOXICOLOGY UNIT, NAMC, BETHESDA, MD.

C.O. CAPT J. SIEGEL

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.128 | 0.200 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.037 |
| TOTAL OTHER | 0.120 | 0.181 |
| TOTAL ANNUAL LAB | 0.248 | 0.418 |
| TOTAL INHOUSE | 0.248 | 0.418 |
| TOTAL INHOUSE RDT+E | 0.128 | 0.200 |
| ANNUAL OPERATING COST | 0.015 | 0.015 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 15 | 0 | 5 | 10 |
| CIVILIAN | 8 | 0 | 3 | 5 |
| TOTAL | 23 | 0 | 8 | 15 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|-------|-------|-------------------|-----------|
| | SPACE (THOUSANDS OF SQUARE FEET) | LAB | ADMIN | OTHER | TOTAL | REAL PROP |
| 0 | 2.260 | 0.140 | 1.416 | 3.816 | 0.187 | 0.438 |

...MISSION

EVAL POTENTIALLY TOXIC MATERIAL AND EQUIP ABOARD SUBS.DEVISE SOLUTIONS TO TOXICOLOGIC PROBLEMS AFLOAT.CONDUCT RDT+E IN OPERATIONAL TOXICOLOGY AND HEALTH ENGINEERING.CONDUCT HI PRESS TOX STUDIES.STUDY SYNERGISM OF PRODUCTS FORMED DURING FIRES ABOARD AIRCRAFT CARRIERS

...CURRENT IMPORTANT PROGRAMS

TOXICITY OF TRACE CONTAMINANTS OF SUBMARINE ENVIRONMENTS.INHALATION TOX AND MODE OF ACTION OF DICHLOROACETYLENE.TOX OF TORPEDO PROPELLANTS AND CHEMILUMINESCENT MATERIALS.TOXICITY AND SYNERGISTIC EFFECTS OF PRODUCTS FORMED DURING AIRCRAFT CARRIER FIRES.ACUTE HYPERBARIC TOX OF TRACE CONTAMINANTS AS CO SO2 HALOGENATED OR AROMATIC HYDROCARBONS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

EVAL ACUTE AND CHRONIC TOXICITY OF AIR POLLUTANTS ABOARD SUBS BY EFFECT ON HEMATOLOGIC BIOCHEMICAL ENZYMATIC AND PATHOLOGIC PARAMETERS.DEVELOP MODE AND SITE OF ACTION OF TOXIC MATERIALS. DEVELOP HANDLING PROCEDURES FOR TOX MATERIALS INCLUDING ORAL SKIN OCULAR AND INHALATION HAZARDS. RECOMMEND CONFINED SPACE GUIDELINES AND GOOD OPERATING PROCEDURES TO MINIMIZE HEALTH HAZARDS.COMPARE TOX OF AIR POLLUTANTS AT 0 + 500 PSIG FACILITIES + EQUIP CAPABILITY CONSISTS OF 6-2 CU METER AMBIENT EXPOSURE CHAMBERS.GLEACH 30 LITER ACUTE CHAMBERS.150+ 1000 PSIG CHAMBERS. 7-POINT ON-LINE AUTO CHAMBER SAMPLING SYSTEM.WET CHEM BIOCHEM + HEMATOL LABS. AUTOANALYZER.7 GAS CHROMATOGRS.IR + UV INSTR.MICROCOULOMETER.ASSOC LAB EQUIP.OVERALL CAPABILITY IN AIR POLLUTION INCLUDING AIR ANALYSES EFFECT ON ANIMALS AND SETTING AIR QUALITY CRITERIA

INSTALLATION NAVAL TRAINING DEVICES CENTER, ORLANDO, FLA.

C.O. CAPT F.H. FEATHERSTON TECH. DIR. DR. H.H. WOLFF

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 13.564 | 16.763 |
| TOTAL PROCUREMENT | 48.143 | 81.337 |
| TOTAL O+M | 9.975 | 9.835 |
| TOTAL OTHER | 0.574 | 0.601 |
| TOTAL ANNUAL LAB | 72.256 | 108.536 |
| TOTAL INHOUSE | 23.898 | 23.424 |
| TOTAL INHOUSE RDT+E | 11.561 | 11.656 |
| ANNUAL OPERATING COST | 5.833 | 6.267 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 50 | 1 | 39 | | 11 |
| CIVILIAN | 1128 | 10 | 283 | | 845 |
| TOTAL | 1178 | 11 | 322 | | 856 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|--------------------|---------|---------|---------|-------------------|-------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 60 | 93.580 | 201.356 | 123.346 | 418.282 | 2.850 | 4.401 |

...MISSION

IMPROVE THE EFFECTIVENESS OF THE NAVAL TRAINING PROGRAM THROUGH THE CONDUCT OF RESEARCH LEADING TO + THE DEVELOPMENT + PRODUCTION OF TRAINING EQUIPMENT PROVIDE + CONTROL LOGISTIC + MATERIAL SUPPORT OF SUCH EQUIPMENT.

...CURRENT IMPORTANT PROGRAMS

OPTICAL TECHNOLOGIES IN NAVY TRAINING DEVICES
ELECTRONIC TECHNIQUES FOR NAVY TRAINING DEVICES
PROJECTED VISUAL SIMULATION OF THE NAVAL OPERATIONAL ENVIRONMENT
GENERAL SIMULATION MODELING FOR NAVY TRAINING DEVICES
HUMAN FACTORS IN THE DESIGN AND USE OF NAVAL TRAINING SYSTEMS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

EFFORT IS ALLOCATED TO AREAS OF TRAINING METHODOLOGY AND SIMULATION TECHNOLOGY WHICH SHOW GREATEST PROMISE OF SIGNIFICANT IMPROVEMENT TO TRAINING DEVICE DESIGN. INVESTIGATIONS ARE CONDUCTED BY THE PHYSICAL SCIENCES, ELECTRONICS, VISUAL SIMULATION COMPUTER AND HUMAN FACTORS LABORATORIES. THESE LABORATORIES ADVANCE THE STATE-OF-THE-ART IN TRAINING, METHODOLOGY AND SIMULATION TECHNOLOGY AND MAINTAIN LEADERSHIP IN THE THEORY AND CONCEPT OF SIMULATION FOR TRAINING INVESTIGATE, DISSEMINATE AND EXCHANGE RESEARCH INFORMATION RELATED TO TRAINING DEVICES, SIMULATION TECHNIQUES AND MEANS FOR INTEGRATING MAN AND MACHINE AND COORDINATE FORMULATION OF RESEARCH REQUIREMENTS TO FILL GAPS IN TECHNICAL AND ENGINEERING KNOWLEDGE.

INSTALLATION NAVAL UNDERSEA R+D CENTER, SAN DIEGO, CALIF.

C.O. CAPT C.B. BISHOP TECH. DIR. DR. WM. B. MCLEAN

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 40.081 | 43.849 |
| TOTAL PROCUREMENT | 17.541 | 18.499 |
| TOTAL O+M | 9.385 | 7.893 |
| TOTAL OTHER | 12.662 | 5.560 |
| TOTAL ANNUAL LAB | 79.669 | 75.805 |
| TOTAL INHOUSE | 53.255 | 48.995 |
| TOTAL INHOUSE RDT+E | 27.311 | 29.319 |
| ANNUAL OPERATING COST | 16.606 | 18.073 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 304 | 0 | 33 | 271 |
| CIVILIAN | 1621 | 85 | 652 | 969 |
| TOTAL | 1925 | 85 | 685 | 1240 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------------|--------------------------|----------|-----------|-------------------|--|
| | SPACE (THOUSANDS LAB ADMIN | OF SQUARE FEET) OTHER | TOTAL | REAL PROP | EQUIP | |
| 37615 | 331.944 33.457 | 666.654 | 1032.055 | 36.703 | 44.540 | |

...MISSION

TO CONDUCT A PROGRAM OF WARFARE ANALYSIS, RESEARCH, DEVELOPMENT, TEST, EVALUATION, SYSTEMS INTEGRATION, AND FLEET ENGINEERING SUPPORT IN UNDERSEA WARFARE AND TECHNOLOGY.

...CURRENT IMPORTANT PROGRAMS

ADVANCED SONAR TECHNICS DEVEL + FLEET SONAR SYSTEMS IMPROVEMENT
OCEAN SCIENCES, INCL MARINE BIOSCIENCES, WITH USW APPLICATION
TORPEDO DEVEL + IN-SERVICE SUPPORT + MODERNIZATION PROGRAM
DEEP SUBMERGENCE RECOVERY + WORK SYSTEMS DEVEL + TEST
FLEET SUPPORT INCL ASW ANALYSIS + EFFECTIVENESS EVAL.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ORIGINATE + DEVELOP NEW CONCEPTS IN UNDERSEA WARFARE + OCEAN TECHNOLOGY. CONDUCT RESEARCH RELATED TO USW PROBLEMS PECULIAR TO PACIFIC AREAS. DEVELOP INTEGRATED USW SYSTEMS, DEEP OCEAN ENGR EQUIP + TECHNICS, + FACILITATE THEIR PRODUCTION + FLEET USE. ASSESS ASW FORCES, PROGRAMS, TACTICS. RDT+E LABS SDIEGO, PASADENA, HAWAII. SEA TEST + ENGR RANGES SAN CLEMENTE IS, MORRIS CAM, LBEACH. ACOUSTIC PROPAGATION RANGE OFF CAL COAST. CALIBRATION STA, LAKE PEND OREILLE. ARCTIC FIELD STA, ALASKA. MARINE BIOSCI FACS, ARCTIC SUBMARINE LAB + POLAR ICE SIMULATOR, TRANSDUCER EVAL CTR ANECHOIC ALL FREQUENCIES, ASW COMPUTER SIMULATION CTR, RESEARCH SHIPS + CRAFT INCL USNS S.P. LEE T-AG-192, DATA ACQUISITION, PLAYBACK+ANAL FAC FOR DEVEL+EVAL OF SIGNAL PROCESSING TECHNIQS, RESCUE SYSTEM TEST FAC, VARIABLE ANGLE LAUNCHER, + OTHERS.

INSTALLATION NAVAL UNDERWATER SYSTEMS CENTER, NEWPORT, R.I.

C.O. CAPT ROBERT T. LUNDY TECH. DIR. HAROLD E. NASH

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 39.288 | 55.264 |
| TOTAL PROCUREMENT | 36.279 | 34.378 |
| TOTAL O+M | 18.650 | 20.944 |
| TOTAL OTHER | 3.304 | 13.971 |
| TOTAL ANNUAL LAB | 97.521 | 124.557 |
| TOTAL INHOUSE | 59.631 | 67.517 |
| TOTAL INHOUSE RDT+E | 26.372 | 27.416 |
| ANNUAL OPERATING COST | 14.284 | 17.396 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 109 | 0 | 24 | | 85 |
| CIVILIAN | 2936 | 60 | 1313 | | 1623 |
| TOTAL | 3045 | 60 | 1337 | | 1708 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------------|--------------------------|----------|-----------|-------------------|--|
| | SPACE (THOUSANDS LAB ADMIN | OF SQUARE FEET) OTHER | TOTAL | REAL PROP | EQUIP | |
| 338 | 480.273 200.987 | 581.202 | 1270.462 | 28.158 | 19.859 | |

...MISSION

TO PLAN AND CONDUCT PROGRAMS OF WARFARE AND SYSTEMS ANALYSES RESEARCH
DEVELOPMENT TEST EVALUATION AND FLEET SUPPORT IN UNDERWATER WARFARE
WEAPONS SYSTEMS + COMPONENTS UNDERSEAS SURVEILLANCE SYSTEMS SUBMARINE
COMMUNICATIONS SYSTEMS NAVIGATION + RELATED SCIENCE + TECHNOLOGY

...CURRENT IMPORTANT PROGRAMS

ACOUSTIC-ENVIRONMENTAL MEASUREMENTS AT SEA
ELECTROMAGNETIC ENVIRONMENTAL MEASUREMENTS AT SEA
INDEPENDENT RESEARCH AND EXPLORATORY DEVELOPMENT ON WEAPONS SYSTEMS
OCEANOGRAPHIC INVESTIGATIONS RELATED TO WEAPON PERFORMANCE
CONDUCT OF UNDER-THE-ICE EXPERIMENTAL INVESTIGATIONS AND PROGRAMS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PLAN AND CONDUCT PROGRAMS CONCERNED WITH APPLIED RDT+E OF SUBMARINE AND
SURFACE SHIP SONARS UNDERWATER COMMUNICATION AND NAVIGATION SYSTEMS
TACTICAL DISPLAYS FIRE CONTROL UNDERWATER WEAPONS AND LAUNCHERS. CONDUCT
R+D IN UNDERWATER TARGET SYSTEMS RANGE TECHNOLOGY ACOUSTIC PROPAGATION
AND RELATED ENVIRONMENTAL STUDIES. PROVIDE SHIP ACQUISITION TECHNICAL
SUPPORT FOR UNDERWATER SYSTEMS ASW SUPPORT AND FLEET READINESS SUPPORT
FOR ALL UNDERWATER WEAPONS SYSTEMS. MAJOR UNIQUE EQUIPMENTS + FACILITIES
INCLUDE BERMUDA RESEARCH FACILITY/ASW WEAPON FIRE CONTROL R+D FACILITY/
SHALLOW AND DEEP WATER TORPEDO TEST RANGES/ASW LAUNCHING DEVICE R+D
FACILITY/ACOUSTIC MEASUREMENT + TRANSDUCER RESEARCH AND EVALUATION
FACILITY/ANALYSIS AND COMPUTER LABS TO EVALUATE EXISTING AND PROPOSED
WEAPONS SYSTEMS AND TO CONDUCT DATA REDUCTION AND ANALYSIS.

INSTALLATION NAVAL UNIT, FORT DETRICK, FREDERICK, MD.

C.O. CAPT G.W. WERNER

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.036 | 0.045 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.125 | 0.143 |
| TOTAL ANNUAL LAB | 0.161 | 0.188 |
| TOTAL INHOUSE | 0.161 | 0.188 |
| TOTAL INHOUSE RDT+E | 0.036 | 0.045 |
| ANNUAL OPERATING COST | 0.014 | 0.019 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 13 | 1 | 4 | 9 |
| CIVILIAN | 1 | 0 | 0 | 1 |
| TOTAL | 14 | 1 | 4 | 10 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|-------|-------|-------|-------------------|-------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 0 | 0.000 | 2.025 | 0.081 | 2.106 | 0.000 | 0.008 |

...MISSION
PROMOTE MODERN MED SCIENTIFIC RESEARCH JOINTLY WITH DEPT OF THE ARMY AND
EVALUATE IMPROVE AND DEV BIOLOGIC DECONTAMINATION METHODS OF GAS DISSEM-
INATORS

...CURRENT IMPORTANT PROGRAMS
DEVELOPMENT OF NEW EXPERIMENTAL VACCINES
ENVIRONMENTAL PREVENTION AND CONTROL OF AIRBORNE DISEASES
CLEANSING OF HOSP EQUIP AND SPACES WITH GASEOUS DISINFECTANTS
BIOLOGICAL DECONTAMINATION PROCEDURES FOR SHORE AND AFLOAT USE
BIODECONTAMINATION OF DEEP SUBMERGENCE VEHICLES HABITATS AND EQUIP

...FUNCTIONS/EQUIPMENT/CAPABILITIES
DEVELOP MATERIALS AND METHODS COMPATIBLE WITH NAVY REQUIREMENTS FOR THE
PREVENTION AND CONTROL OF DISEASES OF NATURAL AND UNNATURAL ORIGIN
MAJOR LAB EQUIP AND FACILITIES FOR SAFE HANDLING OF PATHOGENIC MICROOR-
GANISMS MADE AVAILABLE BY ARMY DISSEMINATORS WITH ANCILLARY EQUIP FOR
STERILIZATION OF LABS HOSPITALS SUBMARINES AND DEE SEA SUBMERGENCE
VEHICLES HABITATS AND EQUIP CAPABILITY IN BIOLOGICAL DECONTAMINATION
VIRAL AND BACTERIAL SEROLOGY VIRAL AND TISSUE CULTURE AND AEROBIOLOGY

INSTALLATION NAVAL WEAPONS CENTER, CHINA LAKE, CALIF.

C.O. RADM W.J. MORAN TECH. DIR. H.G. WILSON

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 83.405 | 85.000 |
| TOTAL PROCUREMENT | 32.846 | 43.500 |
| TOTAL O+M | 3.110 | 4.000 |
| TOTAL OTHER | 32.153 | 30.300 |
| TOTAL ANNUAL LAB | 151.514 | 162.800 |
| TOTAL INHOUSE | 91.556 | 97.263 |
| TOTAL INHOUSE RDT+E | 52.246 | 53.473 |
| ANNUAL OPERATING COST | 42.521 | 42.900 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 729 | 0 | 53 | 676 |
| CIVILIAN | 4308 | 109 | 1358 | 2950 |
| TOTAL | 5037 | 109 | 1411 | 3626 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|---------|--------------------|---------|----------|----------|-------------------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 1092920 | 1310.547 | 169.566 | 5095.208 | 6575.321 | 227.607 | 82.899 |

...MISSION
TO CONDUCT A PROGRAM OF WARFARE ANALYSIS, RESEARCH, DEVELOPMENT, TEST, EVALUATION, SYSTEMS INTEGRATION, AND FLEET ENGINEERING SUPPORT IN NAVAL WEAPONS SYSTEMS PRINCIPALLY FOR AIR WARFARE AND TO CONDUCT INVESTIGATIONS INTO RELATED FIELDS OF SCIENCE AND TECHNOLOGY,

...CURRENT IMPORTANT PROGRAMS
AGILE--ADVANCED AIR-TO-AIR MISSILE SYSTEM.
BULLDOG--CLOSE AIR SUPPORT WEAPON SYSTEM.
FUEL AIR EXPLOSIVE WEAPON SYSTEM.
HARPOON--AIR AND SURFACE LAUNCHED SHIP ATTACK SYSTEM.
NIGHT ATTACK--FLIR, APC, INDAM--ADVANCED AIR-TO-SURFACE WEAPON SYSTEM.

...FUNCTIONS/EQUIPMENT/CAPABILITIES
FUNCTIONS INCLUDE DEVELOPMENT OF AIR LAUNCHED WEAPONS AND ASSOCIATED AVIONICS, TACTICAL MISSILES FOR AIR LAUNCH, POINT DEFENSE, AND ANTI-SHIP OPERATIONS, AND SUBSYSTEM DEVELOPMENT FOR THESE SYSTEMS, INCLUDING PROPULSION, GUIDANCE AND CONTROL, WARHEADS, FUZES, AND LAUNCHERS OPERATIONS ANALYSIS AND SIMULATION, AND BASIC AND APPLIED RESEARCH IN RELEVANT FIELDS.
FACILITIES INCLUDE MICHELSON LAB, WARHEAD RESEARCH LAB, GROUND AND AIRCRAFT RANGES, SUPERSONIC TEST TRACKS, SOLID STATE DEVICES LAB, FUZE MODEL RANGE, ATMOSPHERIC APPLICATIONS LAB, AIRCRAFT SURVIVABILITY RANGE, PROPULSION RESEARCH LAB, STRIKE WARFARE SIMULATION LAB, MICROELECTRONICS FACILITY, MICROWAVE ANECHOIC FACILITIES, DIGITAL AND ANALOG COMPUTER FACILITIES, ECHO RANGE, TECHNICAL LIBRARY + MACH SHOPS.

INSTALLATION NAVAL WEAPONS EVALUATION FACILITY, ALBUQUERQUE, N.MEX

C.O. CAPT W.W. STRONG TECH. DIR. F.X. BUSHNER

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 1.338 | 1.050 |
| TOTAL PROCUREMENT | 0.230 | 0.598 |
| TOTAL O+M | 0.875 | 0.959 |
| TOTAL OTHER | 2.100 | 2.213 |
| TOTAL ANNUAL LAB | 4.543 | 4.820 |
| TOTAL INHOUSE | 4.526 | 4.720 |
| TOTAL INHOUSE RDT+E | 1.321 | 0.950 |
| ANNUAL OPERATING COST | 0.375 | 0.445 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 210 | 0 | 68 | 142 |
| CIVILIAN | 90 | 1 | 51 | 39 |
| TOTAL | 300 | 1 | 119 | 181 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|--------|--------|---------|-------------------|-------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 4 | 17.942 | 17.942 | 91.118 | 127.002 | 6.000 | 0.409 |

...MISSION

PLAN-COORDINATE NAVY NUCLEAR SAFETY PROGRAM TO ENHANCE FLEET SAFETY
CONDUCT NUCLEAR SYSTEMS SAFETY STUDIES-REVIEWS ON US AND FOREIGN SYSTEMS
PUBLISH NEW-REVISED NUC NONNUC CHECKLISTS VERIFY ASSOCIATED LOADING AND
DETERMINE MILITARY CHARACTERISTICS AND STOCKPILE ENVIRONMENT FOR NEW

...CURRENT IMPORTANT PROGRAMS

COORDINATED NAVY NUCLEAR SAFETY PROGRAM AND DISSEMINATED SAFETY INFO
COMPLETED VARIOUS SHIP AMPH SUB AIRCRAFT NUCLEAR SYSTEMS SAFETY STUDIES
PROVIDED NUCLEAR WEAPONS ACCEPTANCE VULNERABILITY EMERG DESTRUCT DATA
PUBLISHED NUC NONNUC WEAPONS-AC CHECKLISTS VERIFIED LOADING MANUALS
COMPLETED ATE NUCLEAR WEAPONS TRIALS FOR BOARD OF INSPECTION AND SURVEY

...FUNCTIONS/EQUIPMENT/CAPABILITIES

WPNS SUPPORT BOARD INSP AND SURVEY NUC WPN TRIALS AND SHIP ACCEPTANCE
PROVIDE DESIGN CRITERIA MILITARY CHARACTERISTICS STOCKPILE-TO-TARGET
DATA FOR CNO SPECIFIC OPERATIONAL REQUIREMENTS ON NEW NUC SYSTEMS PLAN
IMPROVED METHODS ASSURING EFFECTIVE NAVY NUCLEAR SAFETY PROGRAM PLAN
CONDUCT SAFETY STUDIES-REVIEWS ON NAVY SYSTEMS SUPPORT BOARD OF INSPECT
ION AND SURVEY CONDUCT VULNERABILITY ANALYSIS OF NAVY A/C TO NUC EFFECTS
AND DEVELOP NEW METHODS FOR EMERG DEST OF WPNS ADVANCE STATE-OF-ART IN
NUC NONNUC CHECKLISTS DEVELOPMENT MANUAL VERIFICATION RELIABILITY CARDS
PERFORM TESTS EVALUATIONS AND PROVIDE TECH SUPP FOR NUC-NONNUC WPN SYST
EMS ASSIST CNO IN NUC SAFETY AND PREVENTION OF ACCIDENTS-INCIDENTS PLAN-
CONDUCT NUC SYSTEMS SAFETY STUDIES-REVIEWS PLAN-COORDINATE NAVY NUC SAF
ETY PROGRAM CONDUCT NUC SYSTEMS TRIALS FOR BOARD INSPECTION AND SURVEY

INSTALLATION NAVAL WEAPONS LABORATORY, DAHLGREN, VA.

C.O. CAPT STEVEN N. ANASTASION TECH. DIR. BERNARD SMITH

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 28.263 | 37.901 |
| TOTAL PROCUREMENT | 22.321 | 12.695 |
| TOTAL O+M | 7.876 | 8.546 |
| TOTAL OTHER | 12.828 | 17.165 |
| TOTAL ANNUAL LAB | 71.288 | 76.307 |
| TOTAL INHOUSE | 54.582 | 59.390 |
| TOTAL INHOUSE RDT+E | 22.933 | 32.501 |
| ANNUAL OPERATING COST | 9.557 | 11.005 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 100 | 1 | 25 | | 75 |
| CIVILIAN | 2703 | 60 | 958 | | 1745 |
| TOTAL | 2803 | 61 | 983 | | 1820 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|--------|---------|----------|-------------------|--------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 4490 | 541.641 | 76.842 | 933.132 | 1551.615 | 64.979 | 30.977 |

...MISSION

CONDUCTS A PROGRAM OF WARFARE ANALYSIS, RDT+E, SYSTEMS INTEGRATION, AND FLEET ENGINEERING SUPPORT IN NAVAL WEAPONS SYSTEMS, PRINCIPALLY FOR SURFACE WARFARE, AND CONDUCTS SUPPORTING PROGRAMS IN OTHER WARFARE AND FIELDS OF TECHNOLOGY

...CURRENT IMPORTANT PROGRAMS

LONG RANGE GUN SYSTEM AND GUIDED AMMUNITION PROGRAMS
NAVAL TACTICAL RECONNAISSANCE AND SURVEILLANCE PROGRAMS
GUIDANCE DATA FOR POLARIS/POSEIDON/ULMS/FBM SYSTEMS PROGRAMS
NAVY AND MARINE CORPS FIRE SUPPORT STUDIES
DIGITAL FIRE CONTROL SOFTWARE/HARDWARE PROGRAMS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

LAB CAPABILITIES SUPPORT WORK IN TACTICAL, STRATEGIC, AMPHIBIOUS AND MINE WARFARE ANALYSIS SYSTEMS EFFECTIVENESS STUDIES SATELLITE GEODESY DIGITAL FIRE CONTROL SYSTEMS RDT+E IN WARFARE + SURFACE LAUNCHED WEAPON ELECTROMAGNETIC WARFARE GEO, INTERIOR, EXTERIOR + TERMINAL BALLISTICS WEAPONS SAFETY WARHEAD + AMMO R+D GUIDANCE + WEAPONS CONTROL PRODUCT ENGR MODEL FABRICATION ELECTRONIC AND APPLIED PHYSICS FACILITIES INCLUDE PHYSICAL METALLURGICAL, EXPLOSIVES EXPERIMENTAL, CHEM, WEP SAFETY RES, PHOTO, ELECTROMAGNETICALLY SHIELDED, AIRBORNE, BIO DETECT LABS COMPLETE COMPUTATION AND ANALYSIS CENTER WARHEAD RDT+E, EXPLOSIVES, ENVIRONMENTAL, TARGET SIMULATION, TEST+MISSILE LAUNCH RANGE, STATIC TEST, GUNNERY + MISSILE FIRE RANGES, CONICAL SHOCK TUBE, ORDNANCE RADIOGRAPHIC, AND EXPERIMENTAL MACHINE SHOP FACILITIES.

INSTALLATION AEROPROPULSION LAB., WPAFB, OHIO

C.O. COL T.P. MOTT-SMITH DEPUTY DIR. M.P. DUNNAM

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 52.638 | 50.805 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.000 | 0.000 |
| TOTAL ANNUAL LAB | 52.638 | 50.805 |
| TOTAL INHOUSE | 4.393 | 4.899 |
| TOTAL INHOUSE RDT+E | 4.393 | 4.899 |
| ANNUAL OPERATING COST | 0.624 | 0.632 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 58 | 3 | 51 | 7 |
| CIVILIAN | 331 | 5 | 168 | 163 |
| TOTAL | 389 | 8 | 219 | 170 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|--------|---------|---------|-------------------|--------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 40 | 309.500 | 66.500 | 274.775 | 650.775 | 12.894 | 16.713 |

...MISSION

PLAN, FORMULATE AND EXECUTE EXPLORATORY AND ADVANCED DEVELOPMENT PROGRAMS IN AIR-BREATHING AND ELECTRIC PROPULSION, FLIGHT POWER AND AIRCRAFT FUELS, LUBRICANTS AND FIRE PROTECTION. ENSURE THE RAPID APPLICATION OF RESEARCH AND TECHNOLOGY TO ADVANCED AEROSPACE SYSTEMS.

...CURRENT IMPORTANT PROGRAMS

HIGH TEMPERATURE TURBINE, WITH VARIABLE GEOMETRY AND HIGH STAGE LOADING COMPONENT DEVELOPMENT FOR HIGH PERFORMANCE AND LOW COST TURBINE ENGINES
FOUR MEGAWATT AUXILIARY POWER UNIT AND SUPERCONDUCTING GENERATOR
SOLAR COLLECTOR THERMAL POWER SYSTEM FOR SURVEILLANCE SATELLITES
IMPROVED FIRE EXTINGUISHMENT AND DISPENSERS FOR HABITABLE COMPARTMENTS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TURBOSHAFT ENGINE ALT CELL-FUEL CONTROL SYNTHESIS-CENTRAL DATA SYSTEM,
ENERGY CONVERSION/TRANSFER FAC-PROGRAMMABLE BATTERY TEST RACKS, LUBRICANT RESEARCH FAC-GEAR RIGS-BEARING RIG-SEAL TEST RIGS, FUEL RESEARCH LAB-CORROSION TEST-AGING CHAMBERS-FUEL CHAMBER, ROTOR TEST FAC-UP TO 4000 HP -95 FT MAX DIA UP TO 50000 LB THRUST, TURBINE ENGINE TEST STANDS-10 SEA LEVEL STANDS TO 50000 LB THRUST, 2 TURBINE ENGINE ALTITUDE CELLS TO 3000 LB THRUST-50000 FT-MACH 1.5, PROPELLER WHIRL RIGS-4 RIGS TO 30000 HP, GYROSCOPIC TEST CHAMBER, SPACE POWER VACUUM AND LIQUID METAL LOOP FAC 27 FT DIA BY 37 FT HIGH, HEAT TRANSFER RESEARCH FAC-HYDROGEN COOLED TURBINE ENGINE BLADES, ELECTRO AERODYNAMIC LASER FAC-VARIABLE POWER SUPPLY TO 300 KW AT 100-600 VDC, AIRCRAFT SOLID STATE ELECTRICAL POWER FAC-THREE 350 HP DRIVE STANDS-2 A7 AIRCRAFT ELECTRICAL SIMULATORS

INSTALLATION AEROSPACE MEDICAL LAB. (CLINICAL), LACKLAND AFB, TEX

C.O. COL P.W. MYERS DIR. COL J.J. MC PAUL

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.130 | 0.000 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.262 | 0.000 |
| TOTAL ANNUAL LAB | 0.392 | 0.000 |
| TOTAL INHOUSE | 0.392 | 0.000 |
| TOTAL INHOUSE RDT+E | 0.130 | 0.000 |
| ANNUAL OPERATING COST | 0.045 | 0.000 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 28 | 2 | 8 | 20 |
| CIVILIAN | 2 | 0 | 0 | 2 |
| TOTAL | 30 | 2 | 8 | 22 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|-------|-------|--------|-------------------|-------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 1 | 7.587 | 1.467 | 2.200 | 11.254 | 0.140 | 0.849 |

...MISSION
PROVIDES THE USAF MEDICAL CORPS RESEARCH CAPABILITY IN CLINICAL MEDICINE
IMPROVE DIAGNOSTIC METHODS TO SOLVE MEDICAL PROBLEMS UNIQUE TO THE USAF.
THE AEROSPACE MEDICAL LAB (CLINICAL) WILL CEASE TO FUNCTION AS AN RDT E
FACILITY ON 30 JUNE 1971.

...CURRENT IMPORTANT PROGRAMS
DEVELOP TECHNIQUES TO ENHANCE SURVIVAL OF ORGAN HOMOTRANSPLANTS.
STUDY GLOMULAR ANTIBODIES IN ACUTE AND CHRONIC GLOMERULONEPHRITIS.
EVALUATE NEW CANCER CHEMOTHERAPY AND DRUGS USED IN NEW COMBINATIONS.
INVESTIGATE ALDOSTERONE/ANGIOTENSIN IN UNILATERAL RENAL HYPERTENSION.
EVALUATE REHABILITATION CAPABILITIES FOLLOWING MYOCARDIAL INFARCTION.

...FUNCTIONS/EQUIPMENT/CAPABILITIES
PROVIDE USAF MEDICAL CORPS WITH RESEARCH FACILITIES TO CONDUCT MEDICAL,
SURGICAL AND DENTAL RESEARCH. MAINTAIN AN OPERATING SUITE WITH VETERINARY
SUPPORT. SPECIALTY LABORATORIES IN IMMUNOLOGY, HEMATOLOGY, INFECTIOUS
DISEASE, EXERCISE PHYSIOLOGY, ENDOCRINOLOGY AND BIOCHEMISTRY, HAVE CAPA-
BILITY TO PERFORM SOPHISTICATED ASSAYS OF TRACE HUMAN HORMONES, INSULIN,
GROWTH HORMONE, ANGIOTENSIN, ALDOSTERONE, ETC., SERUM COMPLEMENT, VIT B12
FOLIC ACID AND LEUKOCYTE HISTOCOMPATIBILITY. TOTAL CAPABILITY TO STUDY
EXERCISE PHYSIOLOGY, SERUM ENZYMES, CONDITIONING AND REHABILITATION,
MAINTAIN FACILITIES, INSTRUMENTATION AND MONITORING EQUIPMENT TO PURSUE
RESEARCH STUDIES AND DEVELOP TECHNIQUES IN CONSONANCE WITH THE HIGHEST
STANDARDS OF MEDICAL CARE AND CLINICAL INVESTIGATION, INCLUDING ATOMIC
ABSORBER, LIQUID SCINTILLATION COUNTER, ULTRACENTRIFUGATION AND RECORDERS.

INSTALLATION 6570 AEROSPACE MEDICAL RES. LAB., WPAFB, OHIO

C.O. COL C.L. HOLT TECH. DIR. DR. F.W. BERNER

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 10.935 | 11.017 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 1.479 | 1.681 |
| TOTAL ANNUAL LAB | 12.414 | 12.698 |
| TOTAL INHOUSE | 6.173 | 6.643 |
| TOTAL INHOUSE RDT+E | 4.694 | 4.962 |
| ANNUAL OPERATING COST | 0.858 | 0.875 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PRCF |
| MILITARY | 133 | 23 | 71 | 62 |
| CIVILIAN | 169 | 28 | 59 | 70 |
| TOTAL | 302 | 51 | 170 | 132 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|--------|--------|---------|-------------------|--------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 30 | 211.900 | 10.000 | 15.200 | 237.100 | 11.570 | 15.484 |

...MISSION

CONDUCT R+D TO DEFINE MANS PERFORMANCE, PHYSIOLOGICAL TOLERANCE, PERSONAL PROT. NEEDS, AND DEVELOP PROTECTIVE TECHNIQUES AND EQUIP. TO SUSTAIN AND ENHANCE HIS PERF. IN AF OPERATIONAL ENVIRONMENTS. TO EST. DESIGN CRITERIA AND PROVIDE SUPPORT TO SYSTEM DEVELOPMENT IN ABOVE AREAS.

...CURRENT IMPORTANT PROGRAMS

DEFINE TOXIC HAZARDS-ENVIR. POLLUTION EFF. OF MISSILE OPS.-PROPELLANT TEST DEVELOP A HUMAN PERFORMANCE METHOD TO COUNTER OPTICALLY AIMED WEAPONS. INV. HELMET MOUNTED SIGHT SYS-FOR FLT. CONTROL AND WEAPON DELIVERY APPLNS. INV. HIGH G PILOT SEAT, CONTROLS + DISPLAYS DESIGN FOR CPS. ABOVE 8 G, S. DETERMINE MANS EXP. LIMITS, CAPABILITY, PROT. REQ. DURING ESCAPE FROM ADV. A/C

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MAJOR FUNCTIONS-1. IDENTIFY, QUANTITATE AND DETERMINE TOXIC HAZARDS AND ENVIRONMENTAL POLLUTION EFFECTS CREATED BY AF OPS. 2. PROVIDE NEW CONCEPTS, DESIGN CRITERIA FOR PERSONAL PROT. EQUIP.-PRESSURE SUITS, G-SUITS, LIFE SUPPORT, RESTRAINT SYSTEMS, HELMETS. 3. PROVIDE HUMAN ENGINEERING DATA, PRINCIPLES AND TECHNIQUES APPLICABLE TO DESIGN, TEST, OPN, MAINTENANCE OF AF SYSTEMS AND EQUIP. 4. STUDY EFFECTS, DEFINE MANS TOLERANCE AND PERF. DURING BIODYNAMIC AND COMBINED STRESS OF AF OPERATIONS. MAJOR EQUIP. FACILITIES-HUMAN ENGINEERING RESEARCH LAB, TOXIC HAZARDS RESEARCH LAB, RESEARCH ANIMAL FACILITY, BIODYNAMIC-NOISE, VIBRATION, IMPACT, ACCELERATION AND COMBINED STRESS LAB. MAN RATED ALTITUDE AND ENVIRONMENT CHAMBER SIMULATION FACILITIES.

INSTALLATION AEROSPACE RESEARCH LABORATORIES, WPAFB, OHIO
 C.O. COL WARREN J. HARE CHIEF SCIENTIST DR. HANS J.P. VON OHAIN

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 12.581 | 12.615 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 1.010 | 1.000 |
| TOTAL ANNUAL LAB | 13.591 | 13.615 |
| TOTAL INHOUSE | 9.015 | 8.937 |
| TOTAL INHOUSE RDT+E | 8.005 | 7.937 |
| ANNUAL OPERATING COST | 1.598 | 1.761 |

| PERSONNEL | PERSONNEL DATA (E.O. OF FY 1971) | | | | NON-PROF |
|-----------|----------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 79 | 12 | 55 | | 24 |
| CIVILIAN | 227 | 58 | 117 | | 110 |
| TOTAL | 306 | 70 | 172 | | 134 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|--------------------|--------|--------|---------|-------------------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 50 | 134.207 | 28.512 | 34.719 | 197.438 | 10.543 | 11.861 |

...MISSION

PLANS AND EXECUTES USAF RESEARCH PROGRAMS IN THE PHYSICAL AND ENGINEER SCIENCES. PROVIDES TECHNICAL OR MANAGEMENT ASSIST IN SUPPORT OF STUDIES, ANALYSES, RESCH AND DEVELOPMENT PLANNING ACTIVITIES, ACQUISITION, TEST, EVALUATION, OPERATION OF AEROSPACE SYSTEMS AND EQUIPMENT.

...CURRENT IMPORTANT PROGRAMS

INVESTIGATION OF FLUID DYNAMIC ENERGY AND MOMENTUM EXCHANGE PROCESSES.
 STUDY OF PROCESSES AT SOLID-GAS AND SOLID-SOLID INTERFACES.
 STUDY OF INFRARED TRANSMISS AND CONVERSION PROCESSES IN II-VI MATERIALS.
 FUNDAMENT. RESCH ON NON-EQUILIBRIUM IONIZAT AND EXCITAT PROC IN PLASMAS.
 STUDY OF THERMOMECH PROCESS ON STRUC AND PROPERTIES OF SELECTED ALLOYS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

ARL CONDUCTS AND SPONSORS FUNDAMENTAL RESCH INO STRUCTURE AND PROPERTIES OF SOLIDS, CHEMICAL PROPERTIES AND PROCESSES, THERMOMECHANICS, HIGH VELOCITY FLUID MECHANICS, AEROSPACE SIMULATION TECHNIQUES, APPLIED MATH, PLASMA DYNAMICS, GENERAL AND ATOMIC PHYSICS, ENERGY CONVERSION, AND SOLID STATE PHYSICS. SUPPORT FACILITIES INCL GLASS SHOP, MACHINE SHOP AND 15000 VOL. TECHNICAL LIBRARY. EXPERIMENTAL FACILITIES INCL. A HIGH REYNOLDS NUMBER SUPERSONIC TUNNEL, 4 HYPERSONIC WIND TUNNELS, AND A SUPERSONIC COMBUSTION FACILITY, THREE VAN DE GRAAFF ACCELERATORS INCL 8 MEV TANDEM ACCELERATOR, A 1000 ATM. ARC PLASMA FACILITY, A TANDEM ION-MOLECULE MASS SPECTROMETER AND CAPABILITY FOR GROWTH OF THIN PLATELET TYPE II-VI CRYSTALS OF A VERY HIGH DEGREE OF PURITY AND SURFACE PERFECTION.

INSTALLATION ARMAMENT DEVELOP. + TEST CENTER, ELGIN AFB, FLA.

C.O. MAJ GEN J.C. MAXWELL CHIEF SCIENTIST T.H. DALEHITE

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 105.651 | 108.742 |
| TOTAL PROCUREMENT | 177.200 | 233.400 |
| TOTAL O+M | 2.319 | 2.349 |
| TOTAL OTHER | 44.508 | 48.002 |
| TOTAL ANNUAL LAB | 329.678 | 392.491 |
| TOTAL INHOUSE | 99.590 | 106.632 |
| TOTAL INHOUSE RDT+E | 52.763 | 56.281 |
| ANNUAL OPERATING COST | 20.000 | 20.002 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 4965 | 15 | 429 | | 4536 |
| CIVILIAN | 2998 | 21 | 610 | | 2388 |
| TOTAL | 7963 | 36 | 1039 | | 6924 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|--------|-------------------------|---------|----------|----------|-------------------|---------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 464741 | 682.324 | 846.537 | 6942.749 | 8471.610 | 199.803 | 248.455 |

...MISSION

EXPL ADV ENGR DEV AND TEST EVAL INITIAL ACQUISITION OF NONNUCLEAR MUNS
CONDUCTS TESTS + EVALUATIONS IN FOLLOWING AREAS EMW AFWET COM/CONTROL
INTRUSION/INTERDICTION, ELECTRO/OPTICAL, CLIMATIC SIMULATION, VERTICAL
PROBES. PERFORMS COMBAT TECH APPL. SUPPORTS TESTS OF OTHER AGENCIES.

...CURRENT IMPORTANT PROGRAMS

DEFENSE SUPPRESSION
IMPROVED AIRCRAFT GUN SYSTEMS
GUIDED BOMB KITS PAVEWAY
MODULAR WEAPONS SERIES
CLOSE AIR SUPPORT WEAPON SYSTEM

...FUNCTIONS/EQUIPMENT/CAPABILITIES

A CAPABILITY OF SCIENTIFIC/ENGINEERING PERSONNEL AND LABORATORIES FOR
EXPL ADV + ENGR DEV IN THE AREA OF NONNUCLEAR MUNITIONS. ARMAMENT SYS
TEST ENVIRONMENT COVERING 728 SQ MI WITH LARGE ADJACENT WATER AREA.
HAS 28 TEST AREAS WITH INSTRUMENTED FACILITIES INCLUDING PRECISION
TRACKING RADARS AND PHOTO-OPTICS. IS USED FOR MUNITIONS TESTS AND
ELECTROMAGNETIC TEST ENVIRONMENT. IS AN INSTRUMENTED COMPLEX OF THREAT
SYSTEMS FOR EVALUATION OF EMW DEVICES AND TECHNIQUES. WEAPONS
EFFECTIVENESS AND SYS TEST ENVIRONMENT PROVIDES A REALISTIC ENVIRONMENT
FOR TESTING A WPNS SYS AGAINST AN ACTIVE DEFENSE SYSTEM. A CLIMATIC LAB
CAPABLE OF TESTING COMPLETE WPNS SYSTEMS. A PROBE LAUNCH FACILITY FOR
LAUNCHING SCIENTIFIC PROBES. A COMPUTER SCIENCES LAB. A PHYSICAL
SCIENCES LAB. A PHOTO LAB. AN INSTRUMENTATION/DESIGN/FAB FACILITY.

INSTALLATION ARNOLD ENGINEERING DEVELOPMENT CENTER, TENN.

C.O. COL WARD E. PROTSMAN CHIEF SCIENTIST DONALD R. EASTMAN

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 51.437 | 55.063 |
| TOTAL PROCUREMENT | 0.000 | 2.157 |
| TOTAL O+M | 0.000 | 1.817 |
| TOTAL OTHER | 4.774 | 5.178 |
| TOTAL ANNUAL LAB | 56.211 | 64.215 |
| TOTAL INHOUSE | 1.311 | 10.285 |
| TOTAL INHOUSE RDT+E | 0.000 | 8.873 |
| ANNUAL OPERATING COST | 3.550 | 0.000 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 103 | 3 | 67 | 36 |
| CIVILIAN | 140 | 3 | 47 | 93 |
| TOTAL | 243 | 6 | 114 | 129 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|--------------------|---------|---------|----------|-------------------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 40117 | 1138.678 | 201.411 | 525.148 | 1865.237 | 355.856 | 56.219 |

...MISSION

PRIMARY MISSION IS TO SUPPORT THE TIMELY ACQUISITION OF QUALITATIVE SUPERIOR AEROSPACE SYSTEMS BY CONDUCTING RESEARCH AND DEVELOPMENT TESTS IN GROUND ENVIRONMENTAL TEST FACILITIES WHICH SIMULATE THE NECESSARY FLIGHT CONDITIONS.

...CURRENT IMPORTANT PROGRAMS

WIND TUNNEL TESTS OF F+15 ACFT CONFIG AND PH2 ENGINE TEST CONTINUE. BEGAN B+1 ACFT CONFIG WIND TUNNEL TESTS AND PREP FOR ENGINE TEST. MINUTE III ROCKET MTR DEVEL, QUAL AND AGING AND SURVEIL TESTS CONTINUE. A+X ACFT CONFIG WIND TUNNEL TESTS BEGAN, STORES SEPARATION TST CONTINUE. OTHER HIGH PRIORITY TEST INCL VIKING, SPACE SHUTTLE, SAFEGUARD.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AEDC IS COMPRISED OF ABOUT 32 MAJOR TEST UNITS HAVING A CAPITAL VALUE OF MORE THAN 400 MILLION. INCLUDED ARE 15 WIND TUNNELS WITH TEST SECTION SIZES TO 16 FT SQ AND SPEEDS RANGING FROM SUBSONIC TO MACH NO 22, SIX TURBINE ENGINE TEST CELLS WHICH CAN PROVIDE TRUE SIMULATION TO ABOVE MACH 3, FOUR ROCKET ALTITUDE TEST CELLS, THE LARGEST RATED AT ONE+HALF MILLION LBS THRUST, THREE HYPERBALLISTIC RANGES, AND FOUR SPACE SIMULATION CHAMBERS, THE LARGEST BEING 42 FT DIAM BY 82 FT HIGH. THESE TEST FACILITIES HAVE SUPPORTED THE DEVELOPMENT AND QUALIFICATION OF EVERY MAJOR AERONAUTICAL, MISSILE AND SPACE SYSTEMS INITIATED SINCE 1954. THROUGH ADEQUATE PLANNING OF AN ENVIRONMENTAL TEST PROGRAM IN THESE FACILITIES, DEVELOPMENT PROGRAM MANAGERS CAN HELP TO ASSURE THAT SYSTEM DESIGN DEFICIENCIES ARE FOUND EARLY, PREVENTING COST AND SCHED OVERRUNS.

INSTALLATION AVIONICS LAB., WPAFB, OHIO

C.O. COL M. MICHAEL BONNER CHIEF SCIENTIST DR. BERNARD H. LIST

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 90.818 | 99.720 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 1.336 | 1.200 |
| TOTAL ANNUAL LAB | 92.154 | 100.920 |
| TOTAL INHOUSE | 9.835 | 16.158 |
| TOTAL INHOUSE RDT+E | 8.499 | 14.958 |
| ANNUAL OPERATING COST | 3.332 | 5.864 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|-------------|------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 91 | 7 | 90 | | 1 |
| CIVILIAN | 504 | 11 | 291 | | 213 |
| TOTAL | 595 | 18 | 381 | | 214 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|---------|---------|-------------------|--------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 265 | 224.287 | 5.304 | 271.253 | 500.844 | 20.872 | 34.478 |

...MISSION

PLAN, FORMULATE AND EXECUTE EXPLOR AND ADV DEV PGMS IN TECHNOLOGY GROUPS RELATED TO PENETRATION, INFORMATION GATHERING, TARGET DESTRUCTION, AVIONIC SYSTEMS AND TECHNOLOGY INCLUDING ELECTROOPTICAL, MICROWAVE RADAR TECHS ELECTRONIC DEVICES INTEGRATED CIRCUITS AEROSPACEBORNE SENSORS.

...CURRENT IMPORTANT PROGRAMS

EXPLOIT TECHNIQUES FOR TGT DETECTION, TGT DESIGNATION WEAPON DELIVERY
PENETRATION AIDS OPTICAL COUNTERMEASURES FOR MANNED AIRCRAFT
AIR-BY-AIR NON-COOPERATIVE IFF
ALL WEATHER DIGITAL PROCESSING WEAPON DELIVERY RADAR
FORWARD LOOKING INFRARED EQUIPMENT

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCTS IN-HSE R D TO MAINTAIN A HIGH DEGREE OF TECHNICAL COMPETENCE.
ACTS AS AFSC FOCAL POINT FOR INFO IN ASSIGNED TECHNICAL AREAS. EXECUTES
ASSIGNED PROJECTS FOR AND WORKS CLOSELY WITH ARMY, NAVY, NASA, ARPA, OTHER
GOVT AGENCIES. SUPPORTS AFSC PROGRAMS AND INSURES THE RAPID APPLICATION
OF RESEARCH TECHNOLOGY TO ADVANCED SYSTEMS. PROVIDES TECHNICAL SUPPORT TO
CURRENT FUTURE SYSTEMS PROGRAMS OPERATIONAL SUPPORT PROJECTS IN AREAS OF
ASSIGNED MISSION. PERFORM CONCEPTUAL PLANNING, ANALYSIS STUDIES. MAJOR FAC/
EQUIP ARE-ELECTROOPTICAL SURVEILLANCE FAC WITH 48 IN APERTURE-DYNAMIC
ANALYZER FOR ADVANCED RECON SYSTEMS-CELESTIAL GUIDANCE RESEARCH LAB WITH
A 12 IN CASSEGRAIN TELESCOPE UNDER A 16 FT DIA OBSERVATORY DOME-LASER
RESEARCH FAC-SOLID STATE INTEGRATED CIRCUITS LAB-ELECTROMAGNETIC TECHS
COUNTERMEASURES LAB INCL ECM OCM SIMULATION FAC.

INSTALLATION CAMBRIDGE RESEARCH LABS., L.G. HANSCOM FLD., MASS.

C.O. COL WILLIAM K. MORAN, JR. CHIEF SCIENTIST DR. JOHN HOWARD

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 56.292 | 55.926 |
| TOTAL PROCUREMENT | 0.806 | 0.865 |
| TOTAL O+M | 0.021 | 0.021 |
| TOTAL OTHER | 2.759 | 3.246 |
| TOTAL ANNUAL LAB | 59.878 | 60.058 |
| TOTAL INHOUSE | 33.818 | 35.318 |
| TOTAL INHOUSE RDT+E | 31.058 | 32.071 |
| ANNUAL OPERATING COST | 6.900 | 7.100 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 179 | 10 | 68 | 111 |
| CIVILIAN | 1057 | 150 | 612 | 445 |
| TOTAL | 1236 | 160 | 680 | 556 |

| ACRES | SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET) | | | | COST (MILLION \$) | |
|-------|--|--------|---------|---------|-------------------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 947 | 611.201 | 19.708 | 125.916 | 756.825 | 20.500 | 60.268 |

...MISSION

CONDUCTS AND SUPPORTS AF RELEVANT RESEARCH AND EXPLORATORY DEVELOPMENT IN ENVIRONMENTAL, ENGINEERING, AND PHYSICAL SCIENCES WITH MAJOR EMPHASIS ON GEOPHYSICS AND ELECTRONICS. ALSO CONDUCTS AND SUPPORTS SPECIFICALLY ASSIGNED ADVANCED DEVELOPMENT EFFORTS.

...CURRENT IMPORTANT PROGRAMS

IONOSPHERIC MAPPING AND FORECASTING FOR COMMUNICATIONS
SHORT RANGE TERMINAL FORECASTING
RADIATION HARDENING OF DEVICES AND INTEGRATED CIRCUITS
OPTICAL AND INFRARED BACKGROUND MEASUREMENTS
DENSITY SATELLITE MEAS FOR LOW ALTITUDE ORBITAL SYSTEMS

...FUNCTIONS/EQUIPMENT/CAPABILITIES

CONDUCTS RESEARCH AND TECHNICAL DEVELOPMENT IN TERRESTRIAL, AEROSPACE, OPTICAL, AND SOLAR PHYSICS, IN EM WAVE PROPAGATION, AND IN ELECTRONICS, ENERGY CONVERSION, SOLID STATE AND INFORMATION SCIENCES RELATING TO AIR FORCE NEEDS. EQUIPMENT AND FACILITIES INCLUDE RADIO AND OPTICAL TELESCOPES FOR SOLAR RESEARCH. S,X, AND L BAND RADARS AND A C-130 AIRCRAFT FOR METEOROLOGICAL RESEARCH. ROCKET AND BALLOON LAUNCH FACILITIES, TWO KC-135 AND A C-130 AIRCRAFT FOR OPTICAL, UPPER ATMOSPHERIC AND NEAR SPACE STUDIES. FACILITIES FOR GROWTH OF ELECTRONIC MATERIALS, A VAN DE GRAAFF ACCELERATOR, COBALT 60 SOURCE, 12 MEV LINAC, 29 FOOT MILLIMETER WAVE ANTENNA ALL FOR ELECTRONICS RELATED PROGRAMS, AND A CDC 6600 COMPUTATIONAL NETWORK.

INSTALLATION EASTERN TEST RANGE, PATRICK AFB, FLA.

C.O. MAJ GEN D.M. JONES

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 154.856 | 0.000 |
| TOTAL PROCUREMENT | 0.029 | 0.000 |
| TOTAL O+M | 2.429 | 0.000 |
| TOTAL OTHER | 48.294 | 0.000 |
| TOTAL ANNUAL LAB | 205.600 | 0.000 |
| TOTAL INHOUSE | 45.775 | 0.000 |
| TOTAL INHOUSE RDT+E | 23.556 | 0.000 |
| ANNUAL OPERATING COST | 26.013 | 0.000 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | TOTAL PRCF | NON- PROF |
|-----------|---------------------------------|----------------|--|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | | | |
| MILITARY | 1726 | 44 | | 402 | 1244 |
| CIVILIAN | 2104 | 1 | | 220 | 1884 |
| TOTAL | 3830 | 45 | | 722 | 3128 |

| ACRES | SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET) | | | TOTAL | COST (MILLION \$) | |
|-------|--|---------|----------|----------|-------------------|---------|
| | LAB | ADMIN | OTHER | | REAL PROP | EQUIP |
| 18222 | 133.860 | 385.767 | 7916.900 | 8436.527 | 372.053 | 648.499 |

...MISSION
BALLISTIC MISSILE TESTING R+D
SPACE LAUNCH
OASO
OT/FOT

...CURRENT IMPORTANT PROGRAMS
MINUTEMAN 3
ATLAS/AGENA USAF PROGRAMS
TITA 3
POLARIS
POSEIDON

...FUNCTIONS/EQUIPMENT/CAPABILITIES
GUIDANCE VERIFICATION/MISTRAM
TRACKING SHIP
TELEMETRY MISSILES/SATELLITES
RDR TRACKING MISSILES/SATELLITES
IMPACT SCORING
TELEMETRY SHIP
TELEMETRY AIRCRAFT
PHOTOGRAPHY
DATA PROCESSING
SPACE AND MISSILE LAUNCH FACILITY
COMMUNICATIONS
COMMAND/CONTROL

INSTALLATION FLIGHT DYNAMICS LAB., WPAFB, OHIO

C.O. COL C.A. SCOLATTI CHIEF SCIENTIST DR. DEMETRIUS ZONARS

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 60.668 | 54.083 |
| TOTAL PROCUREMENT | 0.464 | 0.500 |
| TOTAL O+M | 0.665 | 0.700 |
| TOTAL OTHER | 0.149 | 0.000 |
| TOTAL ANNUAL LAB | 61.946 | 55.283 |
| TOTAL INHOUSE | 15.748 | 19.990 |
| TOTAL INHOUSE RDT+E | 15.748 | 19.990 |
| ANNUAL OPERATING COST | 4.066 | 4.305 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 136 | 15 | 57 | | 39 |
| CIVILIAN | 720 | 29 | 419 | | 301 |
| TOTAL | 856 | 44 | 516 | | 340 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|--------|--------|---------|-------------------|--------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 90 | 537.300 | 56.600 | 26.000 | 619.900 | 22.900 | 52.750 |

...MISSION

PLAN AND EXECUTE USAF EXPLORATORY AND ADVANCED DEV PROGRAMS FOR AEROSPACE FLT VEHICLE STRUCTURES FLT MECHANICS FLT CONTROL VEHICLE DYNAMICS AND VEHICLE EQUIPMENT PROVIDE TECH OR MGT ASSIST IN SUPPORT OF STUDIES ANALYSES DEV PLANS TEST EVALUATION MODIFICATION OF AEROSPACE SYS AND EQUIP

...CURRENT IMPORTANT PROGRAMS

1. DEV AUTOMATIC CREW ESCAPE INITIATION AND TEST COMPOSITE LANDING GEAR. 2. DEV STRUCTURE CRACK PROPOGATION DES. GUIDE. 3. DES ION FLT INSTR TO PREDICT ENGINE FAILURE. 4. MODIF. DRONE TO FLT DEMONSTRATE REMOTELY PILOTTED VEH AND DES. FAB. TEST SMALL SCALE RPV. 5. ENHANCE TRANSONIC MANEUVERING AND PERFORM TECH AND INVEST DETECTABILITY OF MIL QUIET A/C.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

AFFDL HAS 18 MAJOR R+D TECHNICAL FACILITIES WITH A CAPITAL REPLACEMENT VALUE OF 132M DOLLARS. INCLUDED ARE WIND TUNNELS, STRUCTURES TEST FACILITY, BALLISTIC IMPACT RANGES, SONIC FATIGUE CHAMBERS, FLIGHT CONTROL TECHNIQUES AND INSTRUMENT LABS. AND RESEARCH SIMULATION FACILITIES, ENVIRONMENTAL CHAMBERS, LANDING GEAR TEST FACILITY AND A VERTICAL WIND TUNNEL. THE HORIZONTAL WIND TUNNELS TEST SIZE RANGE UP TO 8FT DIAMETER AND SPEEDS FROM SUBSONIC TO MACH 15. MAIN STRUCTURES TEST FACILITY IS 251 FT L X 170 FT W X 160 FT MIN CLEAR HEIGHT PERMITTING STRUCTURAL TESTING OF FULL SIZE VEHICLES AND COMPONENTS WITH PROGRAM CONTROLLED SIMULATION OF FORCE AND THERMAL FLIGHT ENVIRONMENTS. THE LARGE SONIC TEST CHAMBER IS 70 L X 56 X 42 H INSIDE DIMENSIONS AND PROVIDES ACOUSTIC CAPABILITY OF 1 MILLION WATTS AT ABOUT 1,000 CPS.

INSTALLATION FLIGHT TEST CENTER, EDWARDS AFB, CALIF.

C.O. BRIG GEN ROBERT M. WHITE

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 41.498 | 39.253 |
| TOTAL PROCUREMENT | 0.183 | 0.591 |
| TOTAL O+M | 0.896 | 0.962 |
| TOTAL OTHER | 25.479 | 30.123 |
| TOTAL ANNUAL LAB | 68.056 | 70.929 |
| | | |
| TOTAL INHOUSE | 59.248 | 63.181 |
| TOTAL INHOUSE RDT+E | 33.852 | 32.451 |
| ANNUAL OPERATING COST | 7.828 | 7.866 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON-PROF |
|-----------|---------------------------------|----------------|---------------|--|----------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 3121 | 62 | 647 | | 2474 |
| CIVILIAN | 1828 | 0 | 198 | | 1630 |
| TOTAL | 4949 | 62 | 845 | | 4104 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|--------|-------------------------|---------|----------|----------|-------------------|---------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 300723 | 939.933 | 406.022 | 5908.879 | 7254.834 | 210.705 | 423.445 |

...MISSION

PLAN/CONDUCT QUANTITATIVE ENG, DEV, TEST + EVAL OF MANNED/UNMANNED AERO
VEH. EVAL INCL AERODYN PERF/STAB/CONTR, SYS + SUBSYS, GNC SUPT EQUIP.
MAINTBLTY/RELIABTY, ACFT ARRESTORS, AERO DECELRTS, CONDUCT RSCH TO SPT MSN
.OPR AERO RSCH PILOT SCH. SEPARATE NASA, DOD TENANTS + GOV CONTRACTORS.

...CURRENT IMPORTANT PROGRAMS

F-111A/D/F SYS/PROG 324A SPEC WEAP TST, PER+FLY QUAL, AND SYS CAT I+II
F-4 FOLLOW ON SYS/PROG 327B/C TWEAD, TISEO, LEAD EDGE SLAT, WILD WEASEL
UHIN/N SYS/PROG 443N
COMPASS ARROW SYS/PROG 468A DRONE TEST + DEVELOPMENT
ADV SPACE TECH/COMPONENTS SYS/PROG 69AJ PCHT+AERIAL RECOVERY TEST+DEV

...FUNCTIONS/EQUIPMENT/CAPABILITIES

TECHNICAL FACILITIES AND EQUIPMENTS ARE AVAILABLE TO PROVIDE A COMPLETE
RANGE OF SERVICES FOR CONDUCTING CATEGORY FLIGHT TESTING OF AERONAUTICAL
SYSTEMS, CONDUCT FLIGHT EVALUATION AND RECOVERY OR RETRIEVAL OF RESEARCH
VEHICLES, TRAIN AEROSPACE RESEARCH PILOTS. ENGINEERING LABS, REALTIME
INSTRUMENTED RANGES, DATA COLLECTION, REDUCTION AND ANALYSIS LABS, PHOTO/TV
, ACFT/ENGINE/MAINT, TEST EQUIP, AND ELECTRONICS SHOPS ALONG WITH A
COMPLEX OF DRY LAKES FOR RECOVERY AND EMERGENCY LANDING PROVIDES VARIOUS
SUPPORT ALL TEST PROGRAMS. OTHER MAJOR FACILITIES ARE- PRECISION IMPACT,
GUNNERY/BOMB, PHOTO RESOLUTION AND IR, RADAR FIDELITY, TACTICAL, + OPTI-
CAL RANGES, CONTRACTOR ASSIGNED HANGARS, SHOPS, LABS, AND OFFICE SPACE
MUNITIONS STORAGE AND CHECKOUT, JOINT PARACHUTE TEST FACILITY AT EL CEN-
TRO NAF, ENGINEERING SIMULATION LAB, AND BARRIER/ARRESTING GEAR COMPLEX.

INSTALLATION FRANK J. SEILER RESEARCH LAB., ACADEMY, COLO.

C.O. COL MILTON D. SPRINKEL CHIEF SCIENTIST LTC HAROLD BECK

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 0.635 | 0.570 |
| TOTAL PROCUREMENT | 0.635 | 0.570 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.331 | 0.320 |
| TOTAL ANNUAL LAB | 1.601 | 1.460 |
| TOTAL INHOUSE | 1.601 | 1.460 |
| TOTAL INHOUSE RDT+E | 0.635 | 0.570 |
| ANNUAL OPERATING COST | 0.014 | 0.019 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 25 | 16 | 18 | 7 |
| CIVILIAN | 13 | 1 | 3 | 10 |
| TOTAL | 38 | 17 | 21 | 17 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|-------|-------|--------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 0 | 9.394 | 2.860 | 0.240 | 12.494 | 1.270 | 1.466 |

...MISSION

CONDUCT RESEARCH IN AEROSPACE MECHANICS, APPLIED MATHEMATICS + CHEMISTRY. ENCOURAGE + SUPPORT ACADEMY FACULTY + CADET RESEARCH BY DIRECT PARTICIPATION, MONITOR FACULTY CONSULTANT PROG, SUMMER LAB PRCG. FOCAL POINT FOR USAF ACADEMY RESEARCH PROPOSED TO THE DOL RES+TECH LABORATORIES AFSC

...CURRENT IMPORTANT PROGRAMS

FUEL CELL AND BATTERY STUDIES-ALUMINUM ANODES IN MOLTEN SALT ELECTROLYTE SYNTHESIS AND CHARACTERIZATION OF ORGANOMETALLIC MONOMERS + POLYMERS -- OPTIMIZATION PROGRAMING AND CONTROL MATH MODELS GUIDANCE SYSTEMS DIFFERENTIAL GAMES IMPERFECT INFO, NONLINEAR CONTROL THEORY + ESTIMATES MECH OF FLUIDS LOW DENSITY SHOCK WAVES, RAM-WING THEORY, AERODYNAM SHAPES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MATH OPTIMIZATION CONTROL AND GUIDANCE SYSTEMS USING BURROUGHS B5500 COMPUTER. ORGANOMETALLIC + ELECTROCHEMISTRY + NITROALIPHATIC AND FLUOROALIPHATIC CHEMISTRY USING 6 POSITION LAB + INSTRUMENT ROOM CONTAINING BANAL NUC MAG RESONATOR SPECTROMETER, X-RAY EQUIPMENT, INFRARED SPECTROPHOTOMETER, MASS SPECTROMETER, AUTOMATIC GAS CHROMATOGRAPH + OTHER EQUIP. FLUID DYNAMICS RESEARCH USING 17 INCH LOW DENSITY SHOCK TUBE AND ASSOCIATED INSTRUMENTATION, 2 INCH HIGH DENSITY SHOCK TUBE + WIND TUNNELS. ADVANCED ANALYSIS AND EVALUATION TECHNIQUES FOR INERTIAL GUIDANCE SENSOR S USING TWO-AXIS TEST TABLE GYRO, AUTOMATIC AZIMUTH ALIGNMENT EQUIP AND ELECTRONIC CONTROL EQUIPMENT FOR 50 SERIES INERTIAL DEVICES LOCATED IN CLASS 1000 CLEAN LAB ON 80 TON AIR SUPPORTED STABLE PLATFORM.

INSTALLATION HUMAN RESOURCES LAB., BROOKS AFB, TEX.

C.O. COL GEORGE K. PATTERSON

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 9.355 | 10.092 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.978 | 1.258 |
| TOTAL ANNUAL LAB | 10.333 | 11.348 |
| TOTAL INHOUSE | 3.882 | 4.472 |
| TOTAL INHOUSE RDT+E | 2.904 | 3.214 |
| ANNUAL OPERATING COST | 0.742 | 0.836 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 134 | 10 | 73 | 61 |
| CIVILIAN | 207 | 27 | 82 | 125 |
| TOTAL | 341 | 37 | 155 | 186 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|----------------------------------|--------|-------|--------|-------------------|-------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 13 | 63.830 | 24.390 | 8.430 | 96.650 | 1.850 | 3.976 |

...MISSION

PRINCIPAL AF INTERFACE WITH SCIENCE, INDUSTRY AND OTHER GOVT AGENCIES FOR MANAGEMENT OF BASIC, EXPLORATORY, AND ADVANCED DEVELOPMENT R D PROGRAM IN PERSONNEL SELECTION, MANAGEMENT AND TRAINING, AND THE EVALUATION OF NEW TECHNICAL DEVELOPMENTS FOR APPLICATION TO AF PROBLEMS.

...CURRENT IMPORTANT PROGRAMS

HUMAN FACTORS IN DESIGN OF TRAINING SYSTEMS. SIMULATION TECHNIQUES FOR AEROSPACE CREW TRAINING. ADVANCED INSTRUCTIONAL SYSTEMS AND ADVANCED SIMULATION FOR UNDERGRADUATE PILOT TRAINING. DESCRIBING, EVALUATING AND STRUCTURING AIR FORCE OCCUPATIONS. DOD MANPOWER DEVELOPMENT PROGRAM EVALUATION AND IMPROVEMENT.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

FUNCTIONAL AREAS OF OCCUPATIONAL ANALYSIS, PERSONNEL PROCUREMENT, PERSONNEL CLASSIFICATION, RETENTION AND SEPARATION PERSONNEL SYSTEM SIMULATION MODELS, MANPOWER REQTS OF AF WEAPON SYSTEMS TRAINING TECHNIQUES, DESIGN OF SIMULATORS AND OTHER TRAINING DEVICES CAPABILITIES, STUDY TRAINING PROBLEMS ASSOCIATED WITH VEHICULAR CONTROL OPERATOR TASKS, CHECKOUT AND MAINTENANCE OF ELECTRONIC EQUIPMENT TECHNICAL AND PROFESSIONAL LIBRARY, PERSONNEL TESTING ROOMS AUDIO VISUAL EQUIPMENT, RESEARCH SIMULATOR COCKPIT INFINITY OPTICS DISPLAY, RAYTHEON PB440 DIGITAL COMPUTER IBM 7040 ELECTRONIC DATA PROCESSING SYSTEM WITH 6 TAPES DISC FILE CARD READ/PUNCH PRINTER AND INQUIRY STATION VISUAL DISPLAY DEVICE CRT ELECTRONICS ASSOCIATES TR48 ANALOG COMPUTER.

INSTALLATION MATERIALS LAB., WPAFB, OHIO

DIR. DR. A.M. LOVELACE CHIEF SCIENTIST DR. S.W. TSAI

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 37.752 | 38.980 |
| TOTAL PROCUREMENT | 15.800 | 12.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.800 | 0.800 |
| TOTAL ANNUAL LAB | 54.352 | 51.780 |
| | | |
| TOTAL INHOUSE | 5.904 | 6.192 |
| TOTAL INHOUSE RDT+E | 5.104 | 5.392 |
| ANNUAL OPERATING COST | 2.000 | 2.000 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|-----|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 57 | 13 | 66 | 0 | |
| CIVILIAN | 357 | 47 | 252 | 105 | |
| TOTAL | 414 | 60 | 318 | 105 | |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|-------|-------|-------|-------------------|-------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 9 | 0.213 | 0.022 | 0.038 | 0.273 | 6.600 | 9.600 |

...MISSION

PLAN, FORMULATE AND EXECUTE RESEARCH, EXPLORATORY AND ADVANCED DEVELOPMENT AND MANUFACTURING METHODS FOR NEW MATERIALS OF ALL CLASSES IN SUPPORT OF THE AF MISSION. ACT AS AFSC FOCAL POINT FOR MATERIALS TECHNOLOGY INFO. INSURE TIMELY TRANSITIONING OF NEW MATERIALS AND TECHNOLOGY TO AF SYSTEM

...CURRENT IMPORTANT PROGRAMS

MATERIALS AND TECHNIQUES FOR A/C STRUCTURAL INTEGRITY AND RELIABILITY.
MATERIALS AND TECHNIQUES FOR AF WEAPONS SURVIVABILITY AND HARDENING
TACTICAL AND LIMITED WARFARE MATERIALS AND TECHNOLOGY SUPPORT.
MANUFACTURING TECHNOLOGY OF NEW MATERIALS FOR SYSTEMS APPLICATION
ADV COMPOSITES, METALS AND ALLOYS FOR AIRFRAME AND PROPULSION STRUCTURES

...FUNCTIONS/EQUIPMENT/CAPABILITIES

MATERIALS RESEARCH AND DEVELOPMENT FACILITIES AND CAPABILITIES FOR
AEROSPACE STRUCTURES, TIPS FOR BALLISTIC RV. ENGINES, FLUIDS, LUBRICANTS,
FLUID CONTAINMENT, PROPULSION, COATINGS, FIBERS, ARMOR, EM WINDOWS, SENSORS,
DISPLAYS, LASERS AND OPTICAL DEVICES, ELECTRONIC COMPONENTS, NON-DESTRUCT
TESTING, POLYMERS, ADHESIVES, NONMETALLIC MATRIX COMPOSITES, ELASTOMERS,
METALS, ALLOYS, METAL AND CERAMIC COMPOSITES, METAL PROCESSING,
INTERMETALLICS, CERAMICS, STATIC AND DYNAMIC BEHAVIOR. JOINING, GRAPHITE,
ELECTRONIC AND MAGNETIC MATERIALS. PHYSICAL CHEMICAL ANALYSIS. OTHER
MAJOR MATERIALS FUNCTIONS- MANUFACTURING TECHNOLOGY, SYSTEMS APPLICATION
SYSTEMS SUPPORT AND MANAGEMENT OF INFORMATION CENTERS, DOD DEFENSE
METALS AND CERAMICS, THERMOPHYSICAL AND ELECTRONIC PROPERTIES, METAL
MACHINABILITY, AND MECHANICAL PROPERTIES.

INSTALLATION ROCKET PROPULSION LAB., EDWARDS AFB, CALIF.

C.O. COL THOMAS A. MC CREERY CHIEF SCIENTIST DR. FRANK KELLY

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 26.407 | 26.215 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 2.300 | 2.564 |
| TOTAL ANNUAL LAB | 28.707 | 28.779 |
| TOTAL INHOUSE | 12.564 | 13.317 |
| TOTAL INHOUSE RDT+E | 10.264 | 10.753 |
| ANNUAL OPERATING COST | 0.275 | 0.265 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 267 | 15 | 107 | | 160 |
| CIVILIAN | 386 | 11 | 113 | | 273 |
| TOTAL | 653 | 26 | 220 | | 433 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------------------|--------|-------|---------|-------------------|--------|
| | SPACE (THOUSANDS OF SQUARE FEET) | | | | REAL PROP | EQUIP |
| | LAB | ADMIN | OTHER | TOTAL | | |
| 54400 | 419.046 | 99.248 | 4.700 | 523.074 | 29.572 | 25.653 |

...MISSION

PLAN, FORMULATE, PRESENT, AND EXECUTE THE AFSC EXPLOR AND ADV DEVELOPMENT PROGRAMS IN ROCKET PROPULSION SYS, COMPONENTS, PROPELLANTS AND ASSOCD GND EQUIP. CONDUCT IN-HOUSE RSCH. ACT AS AFSC FOCAL POINT FOR INFORMATION IN THE ASSIGNED TECHNICAL AREAS.

...CURRENT IMPORTANT PROGRAMS

INCREASE ICBM PAYLOAD SURVIVABILITY AND PENetration CAPABILITY. INCREASE LIFE, STATION KPG, AND POINT ACCURACY OF SATELLITE SYS. INCREASE ABILITY OF STRATEGIC ACFT TO PENETRATE TO THE TARGET. PROVIDE MAX PROPULSIVE MANEUVERING FOR SPACECRAFT. PROVIDE ROCKET PROPULSION DEVICES FOR HIGH ENERGY LASERS.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

A COMPONENT TEST LAB AND CENTRIFUGE FOR TESTING SMALL PROPULSION SYS AND COMPONENTS UNDER SIMULATED SPACE ENVIRONMENTS. FACILITIES FOR FORMULATG AND TESTING IN RKT MOTORS SMALL QUANTITIES OF NEW SOLID AND LIQUID PROPELLANTS. A CHEM LABORATORY FOR SYNTHESIS, ANALYSIS, AND FORMULATION OF NEW PROPELLANTS. A SOLID MOTOR TEST AND EVAL COMPLEX FOR INVESTIGATION OF COMBUSTION, AGING, STRUCTURAL INTEGRITY AND EXHAUST PLUMES. AMBIENT AND ALTITUDE TESTING OF TOXIC RKTS UP TO 100,000 LB THRUST. HOT AIR CAPABILITY TO TEST AIR BREATHING PROPULSION UP TO MACH 4.0, 100,000 FT ALT. A FACILITY FOR TESTING RKT ENGINES UP TO 10,000,000 LB THRUST. IN-HOUSE ANALYTICAL CAPABILITY FOR W/S PROPULSION SYS OPTIMIZATION, TRADE-OFF AND MISSION STUDIES. A COMPUTER FACILITY FOR DESIGN, ANALYSIS, AND TEST DATA REDUCTION. FABRICATION SHOPS FOR EXPER TEST HWRE AND TEST SYSTEMS.

INSTALLATION ROME AIR DEVELOPMENT CENTER, GRIFFIS AFB, N.Y.

C.O. COL JOHN C. TOOMAY CHIEF SCIENTIST DR. JOHN S. BURGESS

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 81.733 | 80.000 |
| TOTAL PROCUREMENT | 31.729 | 30.000 |
| TOTAL O+M | 5.354 | 5.000 |
| TOTAL OTHER | 38.651 | 33.490 |
| TOTAL ANNUAL LAB | 157.467 | 148.490 |
| TOTAL INHOUSE | 32.002 | 30.290 |
| TOTAL INHOUSE RDT+E | 26.155 | 25.600 |
| ANNUAL OPERATING COST | 6.775 | 7.144 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 324 | 1 | 184 | | 140 |
| CIVILIAN | 1177 | 16 | 610 | | 567 |
| TOTAL | 1501 | 17 | 794 | | 707 |

| ACRES | SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET) | | | | COST (MILLION \$) | |
|-------|--|---------|---------|----------|-------------------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 2784 | 741.466 | 112.793 | 187.306 | 1041.565 | 24.958 | 91.264 |

...MISSION

PLANS AND EXECUTES EXPLORATORY AND ADVANCED DEVELOPMENT PROGRAMS FOR ELECTROMAG INTELLIGENCE AND RECON PROCESSING, DISPLAYS, SURVEILLANCE, RELIABILITY AND COMPATIBILITY, COMMUNICATIONS FOR AIR FORCE, DOD AND OTHER ORGANIZATIONS, PROVIDES TECHNICAL CONSULTATION TO MAJOR AIR COMMANDS.

...CURRENT IMPORTANT PROGRAMS

OVER THE HORIZON DETECTION EXPERIMENTS AND DEVELOPMENTS
INTELLIGENCE AND RECON EXPLORATORY DEVELOPMENTS AND FIELD SUPPORT
INTEGRATED COMMUNICATION NAVIGATION AND IDENTIFICATION TECHNIQUES
SIGNAL PROCESSING TEST FACILITY FOR FINE GRAIN SATELLITE DIAGNOSIS
ELECTROMAGNETIC RELIABILITY AND COMPATIBILITY TECH AND FIELD SUPPORT

...FUNCTIONS/EQUIPMENT/CAPABILITIES

PROVIDES A WELL BALANCED COMBINATION OF PROFESSIONAL SKILLS AND EXPERIMENTAL FACILITIES TO MARRY THEORETICAL STUDIES TO POTENTIAL APPLICATION. BY COMBINATION OF AIRBORNE LABORATORY MEASUREMENT IN INSTRUMENTED FLIGHT TEST AIRCRAFT AND FLEXIBLE ON-BASE AND OFF-BASE EXPERIMENTAL SITES, A HIGH DEGREE OF SOPHISTICATION IS ACHIEVED FOR CONDUCTING GROUND ELECTROMAGNETIC STUDIES AND EXPERIMENTS. CAPABILITIES ARE AVAILABLE FOR CONDUCTING HIGH AND LOW-POWER EXPERIMENTS OVER ELECTROMAGNETIC SPECTRUM FROM EXTREMELY LOW FREQUENCIES TO LIGHT. SCIENTIFIC STUDIES ARE PERFORMED USING ONE OF THE NATIONS LARGEST ON-LINE TIME SHARING COMPUTERS. RESOURCES ARE PRIMARILY USED IN EXPLORATORY AND ADVANCED DEVELOPMENTS AND EXTENDING TO TECHNICAL SUPPORT THIRTY-FIVE OTHER AIR FORCE AND DOD ORGANIZATIONS.

INSTALLATION SPACE + MISSILE TEST CENTER, VANDENBURG AFB, CALIF.

C.O. BRIG GEN JESSUP D. LOWE TECH. DIR. S.R. RADOM

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 73.680 | 74.181 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 6.320 | 6.829 |
| TOTAL ANNUAL LAB | 80.000 | 81.010 |
| TOTAL INHOUSE | 37.350 | 34.644 |
| TOTAL INHOUSE RDT+E | 31.030 | 27.815 |
| ANNUAL OPERATING COST | 57.280 | 61.413 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | NON- PROF |
| MILITARY | 585 | 0 | 249 | 336 |
| CIVILIAN | 494 | 1 | 195 | 299 |
| TOTAL | 1079 | 1 | 444 | 635 |

| ACRES | SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET) | | | | COST (MILLION \$) | |
|-------|--|---------|---------|---------|-------------------|---------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 45526 | 91.407 | 354.384 | 431.954 | 877.745 | 298.980 | 505.933 |

...MISSION
MANAGE SPACE AND MISSILE FIELD TEST OPERATIONS. INSURE TIMELY DEVELOPMENT OF TEST CAPABILITY INCLUDING PERSONNEL, FACILITIES, INSTRUMENTATION AND DOCUMENTATION.

...CURRENT IMPORTANT PROGRAMS
MINUTEMAN 1,2,+3 OPERATIONAL TESTING
SAFEGUARD SYSTEM TEST TARGET PROGRAM-MINUTEMAN TITAN BOOSTERS
ABRES PROGRAMS
CLASSIFIED SPACE PROGRAM LAUNCHES USING ATLAS, THOR TITAN BOOSTERS
MINUTEMAN 3 R D

...FUNCTIONS/EQUIPMENT/CAPABILITIES
SAMTEC CAPABILITIES INCLUDE TEST LAUNCH AND RANGE SUPPORT. THE FORMER INCLUDES VEHICLE PAYLOAD CHECKOUT, ASSEMBLY, PRELAUNCH TESTING FOR BOOSTERS/WEAPON SYSTEMS SUCH AS THOR. ATLAS, TITAN 2 3, MINUTEMAN 3. THE LATTER INCLUDES BOTH LONG SHORT RANGE INSTRUMENTATION PLANNING SCHEDULING OF ORBITAL, BALLISTIC PROBE LAUNCHES. A VARIETY OF LAND BASED MOBILE INSTRUMENTATION IS AVAILABLE ON THE WEST COAST, ON ISLANDS IN THE PACIFIC ON SHIPS AIRCRAFT TO PROVIDE RANGE SAFETY TEST DATA IN SUPPORT OF LAUNCHES. AVAILABLE LAUNCH AZIMUTHS RANGE FROM 165 TO 330 DEGREES. INSTRUMENTATION CAN BE RECONFIGURED TO MEET NEW PROGRAM REQUIREMENTS. ENGINEERING SEQUENTIAL METRIC PHOTOGRAPHY IS AVAILABLE. IMPACT SCORING OF BALLISTIC WEAPON PAYLOADS IS AVAILABLE AT TWO DOWNRANGE SITES AND IN THE BROAD OCEAN AREA.

INSTALLATION USAF SCHOOL OF AEROSPACE MED., BROCKS AFB, TEX.

C.O. COL EVAN R. GOLTRA

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 11.221 | 11.639 |
| TOTAL PROCUREMENT | 0.188 | 1.130 |
| TOTAL O+M | 0.678 | 0.837 |
| TOTAL OTHER | 6.806 | 4.876 |
| TOTAL ANNUAL LAB | 18.893 | 18.484 |
| TOTAL INHOUSE | 15.921 | 15.057 |
| TOTAL INHOUSE RDT+E | 8.275 | 8.248 |
| ANNUAL OPERATING COST | 2.659 | 3.281 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 603 | 93 | 206 | | 397 |
| CIVILIAN | 406 | 41 | 178 | | 228 |
| TOTAL | 1009 | 134 | 384 | | 625 |

| ACRES | SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET) | | | | COST (MILLION \$) | |
|-------|--|--------|--------|---------|-------------------|--------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 93 | 442.830 | 93.330 | 58.514 | 594.674 | 15.281 | 20.621 |

...MISSION

RESEARCH IN LIFE SUPPORT AND AEROSPACE MEDICINE.
BIOLOGICAL SCIENCES.
CLINICAL EVALUATIONS.
EDUCATION AND TRAINING.

...CURRENT IMPORTANT PROGRAMS

BIOLOGICAL EFFECTS OF RF, NUCLEAR, AND COHERENT RADIATION.
CREW REQUIREMENTS FOR EFFECTIVE OPERATION OF AF SYSTEMS.
DEVELOPMENT OF AEROMEDICAL EQUIPMENT AND SYSTEMS.
MEDICAL SELECTION AND MAINTENANCE OF AIR FORCE CREWS.
DRUG DETECTION AND SCREENING STUDIES.

...FUNCTIONS/EQUIPMENT/CAPABILITIES

USAF SCHOOL OF AEROSPACE MEDICINE - RESEARCH IN AEROSPACE MED PROBLEMS.
ENVIRONMENTAL STRESS, DEVELOPMENTAL ENGINEERING, RADIATION BIOLOGY, LASER
HAZARDS, BIOMETRICS, BIOSCIENCE, BIOMED ENGINEERING AND EPIDEMIOLOGY
FACILITIES. WHOLE BODY COUNTER, HUMAN CENTRIFUGE. VARIOUS TEST CELLS AND
CHAMBERS, COCKCRAFT - WALTON ACCELERATOR, NEUTRON GENERATOR, PHILCO 2000
DIGITAL COMPUTER, ROTATIONAL FLIGHT SIMULATOR, KILO-CURIE CO-60
RADIATION SOURCE. AEROSPACE MEDICAL SCIENCE LAB, AEROSPACE MEDICAL
CONSULTATIVE SERVICES, AEROMEDICAL EVALUATION. CLINICAL SCIENCE, OCULO-
THERMAL, RESEARCH OPTICAL, AUDIOLOGY, VESTIBULAR, PSYCHOBIOLOGY, RADIO-
ISOTOPE, AEROSPACE MEDICAL STANDARDS, AND LASER HAZARDS FACILITIES.
ZEISS PHOTO-COAGULATOR, VECTORCARDIOGRAPH MACHINE, BALLISTOCARDIOGRAPH
MACHINE, PHONOCARDIOGRAPH MACHINE, AND MASS SPECTROMETERS.

INSTALLATION WEAPONS LAB., KIRTLAND AFB, N.M.

C.O. COL ROBERT W. ROWDEN CHIEF SCIENTIST MAJ W.A. WHITAKER

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 67.226 | 88.606 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 8.990 | 9.300 |
| TOTAL ANNUAL LAB | 76.216 | 97.906 |
| TOTAL INHOUSE | 35.221 | 42.766 |
| TOTAL INHOUSE RDT+E | 26.231 | 33.466 |
| ANNUAL OPERATING COST | 0.873 | 0.982 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | | |
| MILITARY | 800 | 84 | 555 | | 205 |
| CIVILIAN | 454 | 18 | 201 | | 253 |
| TOTAL | 1254 | 102 | 756 | | 458 |

| ACRES | SPACE AND PROPERTY | | | | COST (MILLION \$) | |
|-------|-------------------------|--------|--------|---------|-------------------|--------|
| | SPACE (THOUSANDS LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 1174 | 430.547 | 14.620 | 22.187 | 467.354 | 9.913 | 32.340 |

...MISSION

PLAN AND EXECUTE RSCH, EXPLOR, AND ADV DEV PRGMS IN NUC AND ADV WPNS EFFECTS, COMPONENTS AND HAZARDS, NUC WPNS SAFETY AND DELIVERY TECHNIQUES, AND CIVIL ENGR. SPECIFY AND ASSESS SYS HARDNESS. PROVIDE TECH AND MGT ASSIST IN SYS STUDIES, ANALYSIS, ACQUISITION, TEST, EVAL, MOD AND OPER.

...CURRENT IMPORTANT PROGRAMS

NUCLEAR SURVIVABILITY/VULNERABILITY ANALYSIS AND TESTING
NUCLEAR WEAPONS EFFECTS RESEARCH AND TESTING
NUCLEAR SAFETY ANALYSIS AND DESIGN CRITERIA
EXPLORATORY AND ADVANCED DEVELOPMENT OF LASERS
LEAD LABORATORY FOR AIR FORCE CIVIL ENGINEERING TECHNOLOGY

...FUNCTIONS/EQUIPMENT/CAPABILITIES

NUCLEAR WEAPONS EFFECTS RESEARCH, SIMULATION, SAFETY, TEST PARTICIPATION AND ANALYSIS OF WEAPONS SYSTEMS SURVIVABILITY/VULNERABILITY ARE CONDUCTED IN NUCLEAR ENGINEERING TEST LABORATORIES AND PHYSICS LABORATORIES. SIMULATION TESTS ON MISSILES AND COMPONENTS USE ELECTROMAGNETIC PULSE SIMULATORS, GAS GUNS AND PULSE POWER AND X-RAY DEVICES. CIVIL ENGINEERING RESEARCH, EXPLORATORY AND ADVANCED DEVELOPMENT USE SOILS, ENVIRONMENTAL, AND CHEMICAL LABORATORIES AND SHOCK TUBES FOR SIMULATION AND TESTS. LASER RESEARCH, APPLICATION AND DEVELOPMENT IN THE LASER/OPTICS LABORATORY USE LARGE AND HIGH POWER DEVICES. TECHNICAL LIBRARY, METALLURGY AND METROLOGY LABORATORIES, AN EQUIPMENT POOL OF VARIED DIAGNOSTIC AND METERING DEVICES, DUAL CDC-6600 COMPUTER AND MULTI-CHANNEL RECORDING AND DATA REDUCTION SUPPORT RESEARCH AND TESTS.

INSTALLATION ARMED FORCES RADIOBIOLOGY RES. INSTITUTE BETHESDA, MD
 MYRON I. VARON CAPT USN MC

| PROGRAM | PROGRAM DATA BY FISCAL YEAR (MILLION \$) | |
|-----------------------|--|---------------------|
| | 1971 (ACTUAL) | 1972 (ACT + EST) |
| TOTAL RDT+E | 2.905 | 2.969 |
| TOTAL PROCUREMENT | 0.000 | 0.000 |
| TOTAL O+M | 0.000 | 0.000 |
| TOTAL OTHER | 0.814 | 1.021 |
| TOTAL ANNUAL LAB | 3.719 | 3.990 |
| TOTAL INHOUSE | 3.719 | 3.990 |
| TOTAL INHOUSE RDT+E | 2.905 | 2.969 |
| ANNUAL OPERATING COST | 1.081 | 0.920 |

| PERSONNEL | PERSONNEL DATA (END OF FY 1971) | | | NON- PROF |
|-----------|---------------------------------|----------------|---------------|--------------|
| | AUTHORIZED STRENGTH | TOTAL PHD'S | TOTAL PRCF | |
| MILITARY | 67 | 17 | 38 | 29 |
| CIVILIAN | 147 | 13 | 39 | 108 |
| TOTAL | 214 | 30 | 77 | 137 |

| ACRES | SPACE AND PROPERTY (THOUSANDS OF SQUARE FEET) | | | | COST (MILLION \$) | |
|-------|--|--------|--------|--------|-------------------|-------|
| | LAB | ADMIN | OTHER | TOTAL | REAL PROP | EQUIP |
| 10 | 24.660 | 14.906 | 32.913 | 72.479 | 6.135 | 2.551 |

...MISSION
 THE MISSION OF AFRI SHALL BE TO CONDUCT SCIENTIFIC RESEARCH IN THE FIELD OF RADIOBIOLOGY AND RELATED MATTERS THAT ARE ESSENTIAL TO THE MEDICAL SUPPORT OF THE UNITED STATES MILITARY SERVICES, TO NATIONAL WELFARE, AND TO THE WELL-BEING OF MANKIND

...CURRENT IMPORTANT PROGRAMS
 BIOCHEMICAL DIAGNOSIS OF ACUTE AND CHRONIC RADIATION EFFECTS
 DRUG MODIFICATION OF RADIATION INDUCED BEHAVIORAL DECUREMENT
 PREDICTION OF INDIVIDUAL SENSITIVITY TO RADIATION
 EFFECTS OF HIGH DOSES OF IONIZING RADIATION UPON NEURON-TRANSMITTERS
 STIMULATION OF MARROW RECOVERY POSTIRRADIATION

...FUNCTIONS/EQUIPMENT/CAPABILITIES
 FUNCTIONS- OPERATE FACILITIES FOR CONDUCTING RADIOBIOLOGY RESEARCH AND DISSEMINATING RESULTS, CONDUCT ADVANCED TRAINING, OPERATE FACILITIES FOR PRODUCTION OF SHORT-LIVED RADIOISOTOPES, AND PERFORM OTHER SUCH RESEARCH FUNCTIONS AS REQUIRED. MAJOR EQUIPMENT INCLUDES PULSE AND STEADY STATE NUCLEAR REACTOR, 50,000-CURIE COBALT-60 IRRADIATOR, POSITIVE ION ACCELERATOR, ELECTRON MICROWAVE LINEAR ACCELERATOR, AND X-RAY MACHINES, WITH AN ASSOCIATED EXPOSURE ROOM COMPLEX. SUPPORT SERVICES INCLUDE MEASUREMENT OF RADIATION FIELDS, PROVISION AND CARE OF LABORATORY ANIMALS, EQUIPMENT DESIGN AND FABRICATION ASSISTANCE, REAL-TIME DATA ACQUISITION SYSTEM, TELEVISION AND FILM DOCUMENTATION OF EXPERIMENTS, PERSONNEL AND ENVIRONMENTAL MONITORING, EDITORIAL ASSISTANCE IN REPORT PREPARATION, AND A LARGE TECHNICAL LIBRARY.

APPENDIX I

Changes in Organization or Name *

Department of the Army

| | |
|---|---|
| Aeronautical Research Laboratory Ames Research Center Moffett Field, California | Deleted; functions transferred to the Air Mobility R&D Laboratory. |
| Air Mobility R&D Laboratory Moffett Field, California | First time listed. |
| Atmospheric Science Laboratory White Sands, New Mexico | First time listed. |
| Aviation Materiel Laboratories Fort Eustis, Virginia | Deleted; functions transferred to the Air Mobility R&D Laboratory. |
| Avionics Laboratory Fort Monmouth, New Jersey | First time listed. |
| Combat Surveillance Group Fort Monmouth, New Jersey | First time listed. |
| Communications and ADP Laboratory Fort Monmouth, New Jersey | First time listed. |
| Electronic Technology and Devices Laboratory Fort Monmouth, New Jersey | First time listed. |
| Electronic Warfare Laboratory Fort Monmouth, New Jersey | First time listed. |
| Electronics R&D Laboratory Fort Monmouth, New Jersey | Deleted; components reported as individual activities. |
| Night Vision Laboratory Fort Belvoir, Virginia | First time listed. |
| Nuclear Defense Laboratory Edgewood Arsenal, Maryland | Disestablished. |
| Research and Development Technical Support Activity Fort Monmouth, New Jersey | First time listed. |

Department of the Navy

| | |
|---|--|
| Atlantic Underwater Test and Evaluation Center West Palm Beach, Florida | Disestablished; activities merged with those of the Naval Underwater Systems Center. |
|---|--|

*Changes since publication of MAR 70-4, 30 October 1970.

Department of the Navy (continued)

| | |
|---|---|
| Environmental Prediction Research Facility Naval Postgraduate School Monterey, California | First time listed. |
| Naval Ship R&D Laboratory Annapolis, Maryland | Disestablished; functions transferred to the Naval Ship R&D Center in Washington, D. C. |
| Naval Ship R&D Laboratory Panama City, Florida | Same as above. |
| Naval Underwater Sound Laboratory New London, Connecticut | Disestablished; activities merged with those of the Naval Underwater Systems Center. |
| Naval Underwater Systems Center Newport, Rhode Island | First time listed. |
| Naval Underwater Weapons R&E Station Newport, Rhode Island | Disestablished; activities merged with those of the Naval Underwater Systems Center. |
| Naval Weather Research Facility Naval Air Station Norfolk, Virginia | Disestablished; some functions transferred to the Environmental Prediction Research Facility. |

Department of the Air Force

| | |
|---|--|
| 6571st Aeromedical Research Laboratory Holloman Air Force Base, New Mexico | Deactivated. |
| Air Force Armament Development and Test Center Eglin Air Force Base, Florida | New name; formerly the Air Proving Ground Center. |
| Air Force Armament Laboratory Eglin Air Force Base, Florida | Deleted; merged with the Armament Development and Test Center. |
| Air Force Missile Development Center Holloman Air Force Base, New Mexico | Deleted; merged with the Special Weapons Center. |
| Air Proving Ground Center Eglin Air Force Base, Florida | Deleted; new name is Armament Development and Test Center. |
| Air Force Special Weapons Center Kirtland Air Force Base, New Mexico | Deleted; merged with the Missile Development Center. |
| Det 8, Office of Research Analyses Holloman Air Force Base, New Mexico | Discontinued. |
| USAF School of Aerospace Medicine Brooks Air Force Base, Texas | New name; formerly the School of Aviation Medicine. |
| USAF School of Aviation Medicine Brooks Air Force Base, Texas | Deleted; new name as listed above. |

APPENDIX II

Definitions

1. *In-House RDT&E Activities*--Those organizational entities engaged in performing work in any or all of the categories of research, development, test and evaluation. The RDT&E effort, however, should represent a minimum of 25 percent of the total effort of each entity reporting in order to be considered as an RDT&E activity.

2. *Professionals*--Full-time government scientific and engineering personnel actively engaged in RDT&E activities. In the case of civilians, this will include all those holding positions that fall into the following categories under the Civil Service Occupational Groups and Series of Classes, General Schedule:

| | | | | |
|-----|-----|-----|------|------|
| 150 | 440 | 665 | 871 | 1330 |
| 180 | 454 | 668 | 880 | 1340 |
| 190 | 457 | 680 | 881 | 1350 |
| 193 | 460 | 690 | 890 | 1360 |
| 401 | 470 | 701 | 892 | 1370 |
| 403 | 471 | 801 | 893 | 1372 |
| 405 | 482 | 806 | 894 | 1382 |
| 410 | 486 | 808 | 896 | 1384 |
| 413 | 487 | 810 | 1301 | 1386 |
| 414 | 601 | 819 | 1306 | 1510 |
| 430 | 602 | 830 | 1310 | 1515 |
| 434 | 635 | 840 | 1313 | 1520 |
| 435 | 644 | 850 | 1315 | 1529 |
| 436 | 660 | 855 | 1320 | 1530 |
| 437 | 662 | 861 | 1321 | 1540 |

Military professionals, both officer and enlisted, actively engaged in RDT&E activities should be identified with the functions described in the above-referenced civilian job series. Generally, these jobs are referenced in Department of Defense Occupational Conversion Tables DoD 1312.1-0, DoD 1312.1-E under DoD groups 5 and 6 of DoD 1312.1-0, and various other groups of DoD 1312.1-E, published under the provisions of DoD Instruction 1312.1. Lawyers, accountants, chaplains, social workers and educators should be excluded.

3. *Technicians*--Generally nonprofessionals working on an RDT&E project or program in support of a professional. In the case of civilians, it will include, but will not necessarily be limited to, those holding positions that fall into the following categories of the Civil Service Occupational Groups and Series of Classes, General Schedule:

| | | | |
|-----|-----|-----|------|
| 181 | 636 | 681 | 895 |
| 404 | 645 | 682 | 1311 |
| 421 | 646 | 683 | 1316 |
| 455 | 647 | 698 | 1341 |
| 458 | 649 | 699 | 1471 |
| 462 | 650 | 802 | 1374 |
| 621 | 661 | 817 | 1521 |
| 622 | 667 | 818 | 1531 |
| 625 | 669 | 856 | 1541 |

Discretion will have to be exercised by each RDT&E activity in determining the number of military technicians. Generally, they should follow the guidelines established in defining civilian technicians and can be identified in DoD 1312.1-E.

4. *Real Property Cost*--Each reporting activity will be responsible for determining and reporting the cost of real property. This cost should be established in accordance with the guidelines and definitions in DoD Instruction 4165.14. This should also include the cost of installed equipment.

5. *Equipment Cost*--Each reporting activity will be responsible for determining and reporting the cost of personal property. This cost will include those costs incurred by the acquisition (including installation, when applicable) of all property other than real property. It will include personal property such as machine tools, environmental test equipment, furniture, laboratory equipment, vehicles, etc. Items having a unit cost of less than \$200 may be excluded.

6. *Space*--The data to be furnished should include only walled and roofed building space. It should not include such things as parking lots, open storage areas, lean-tos, etc. The source of data may be the annual report submitted in compliance with the requirements of DoD Instruction 4165.14.

7. *In-House Obligations*--Obligations reported under this category are for activities performed, or to be performed, by the organizational entity. Their work is carried on directly by their own personnel. Particular care should be taken to include under in-house performance the cost of supplies and equipment essentially of an off-the-shelf nature that are procured for use in in-house research and development, plus such things as travel, publications, and other types of services in support of in-house functions. Excluded from the in-house total are expenses for planning and administering programs by DoD personnel (including military) of contracts and grants for out-of-house work.

8. *Out-of-House Obligations*--Obligations reported under this category are for activities performed, or to be performed, by other than the organizational entity. Out-of-house performers may include other departmental or DoD organizational entities, industrial firms, educational institutions, not-for-profit institutions, and private individuals. Included as out-of-house work are all expenses paid the out-of-house performers, as well as the expenses incurred in planning and administering these programs by personnel of the organizational entity. This would also include travel and other supporting services.

9. *Annual Operating Cost*--This should generally reflect the overhead cost of operating the laboratory or facility. It should include such things as costs of utilities, rents, janitorial services, guard and fire protection, support services such as supply personnel, printing, maintenance of buildings and grounds, etc. It should not include the salaries of direct labor personnel such as scientists, engineers, technicians, draftsmen, machinists, etc.

APPENDIX III

Selected Standard Abbreviations and Acronyms

| | |
|--|---|
| AAM -- air-to-air missile | GCA -- ground-controlled approach |
| AAW -- antiair warfare | HF -- high-frequency |
| ADPE -- automatic data-processing equipment | IFF -- identification, friend or foe |
| AEC -- Atomic Energy Commission | IR -- infrared |
| AEDC -- Arnold Engineering Development Center | MPT -- military potential test |
| AFMDC -- Air Force Missile Development Center | NAF -- Naval Air Facility |
| AFSC -- Air Force Systems Command | NASA -- National Aeronautics and Space Administration |
| AFWET -- Air Force weapons effectiveness testing | NASC -- Naval Air Systems Command |
| AMC -- Army Materiel Command | NAVORD -- Naval Ordnance Systems Command |
| APG -- Aberdeen Proving Ground | NAVSHIP -- Naval Ship Systems Command |
| ARPA -- Advanced Research Projects Agency | NEMP -- nuclear electromagnetic propagation |
| ASW -- antisubmarine warfare | PI -- product improvement |
| AUS -- Army, United States | POL -- petroleum, oil, lubricants |
| BIS -- Board of Inspection and Survey | QA -- quality assurance |
| BW -- biological warfare | QMDO -- qualitative materiel development objective |
| CBR -- chemical, biological, radiological | QMR -- qualitative materiel requirement |
| CE -- Chief of Engineers, Army | RDT&E -- research, development, test and evaluation |
| CG -- commanding general | RF -- radio frequency |
| CNO -- Chief of Naval Operations | RV -- reentry vehicle |
| COMMELE -- communications electronics | SATS -- short airfield tactical support |
| DA -- Department of the Army | SDR -- small development requirement |
| DASA -- Defense Atomic Support Agency | SI -- ship installation |
| DoD -- Department of Defense | SP -- self-propelled |
| DZ -- drop zone | ST -- service test |
| ECM -- electronic countermeasures | T&E -- test and evaluation |
| ECOM -- Electronics Command, Army | TOTO -- Tongue-of-the-Ocean |
| ED -- engineering development | UDT -- underwater demolition team |
| EDT -- engineering development and test | ULMS -- Undersea Long-Range Missile System |
| EEG -- electroencephalogram | USATECOM -- U. S. Army Test and Evaluation Command |
| EKG -- electrocardiogram | UTTAS -- utility tactical transport aircraft system |
| ELINT -- electronic intelligence | USW -- undersea warfare |
| EMP -- electromagnetic propagation | UV -- ultraviolet |
| EMW -- electromagnetic warfare | V/STOL -- vertical/short takeoff and landing |
| EODC -- Explosive Ordnance Disposal Center | |
| ET -- engineering test | |
| EW -- electronic warfare | |
| FA -- field artillery | |
| FBM -- fleet ballistic missile | |